SONY

Cyber-shot

Digital Still Camera

Cyber-shot Handbook

DSC-H10

Before operating the unit, please read this Handbook thoroughly together with the ***"Instruction Manual"*** and the ***"Cyber-shot Step-up Guide"***, and retain them for future reference.

▼CLICK!


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Basic Operations


Using the shooting functions


Using the viewing functions


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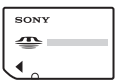

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3-296-279-**12**(1) GB

Notes on using the camera

Notes on the types of “Memory Stick” that you can use (not supplied)



“Memory Stick Duo”
You can use a “Memory Stick Duo” with the camera.



“Memory Stick”
You cannot use a “Memory Stick” with the camera.

Other memory cards cannot be used.

- For details on “Memory Stick Duo”, see page 115.

When using a “Memory Stick Duo” with “Memory Stick” compatible equipment

You can use the “Memory Stick Duo” by inserting it into the Memory Stick Duo Adaptor (not supplied).



Memory Stick Duo Adaptor

Notes on the battery pack

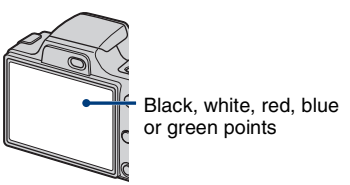
- Charge the battery pack (supplied) before using the camera for the first time.
- You can charge the battery pack even if it is not completely discharged. In addition, even if the battery pack is not fully charged, you can use the partially charged capacity of the battery pack as is.
- If you do not intend to use the battery pack for a long time, use up the existing charge and remove it from the camera, then store it in a cool, dry place. This is to maintain the battery pack functions.
- For details on the usable battery pack, see page 117.

Carl Zeiss lens

The camera is equipped with a Carl Zeiss lens which is capable of reproducing sharp images with excellent contrast.
The lens for the camera has been produced under a quality assurance system certified by Carl Zeiss in accordance with the quality standards of Carl Zeiss in Germany.

Notes on the LCD screen and lens

- The LCD screen is manufactured using extremely high-precision technology so over 99.99% of the pixels are operational for effective use. However, some tiny black and/or bright dots (white, red, blue or green) may appear on the LCD screen. These dots are a normal result of the manufacturing process, and do not affect the recording.



- Exposing the LCD screen or the lens to direct sunlight for long periods may cause malfunctions. Be careful when placing the camera near a window or outdoors.
- Do not press against the LCD screen. The screen may be discolored and that may cause a malfunction.
- Images may trail across on the LCD screen in a cold location. This is not a malfunction.
- Be careful not to bump the movable lens, and be careful not to apply force to it.

The images used in this Handbook

The images used as examples in this Handbook are reproduced images, and are not actual images shot using the camera.

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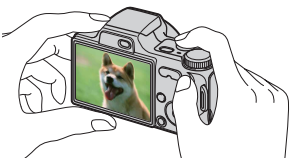
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Basic techniques for better images

Focus Exposure Color Quality Flash



This section describes the basics so you can enjoy the camera. It tells you how to use various camera functions such as the mode dial (page 23), the HOME screen (page 37) and the menus (page 39).

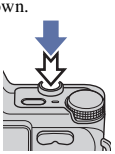
Focus — Focusing on a subject successfully

When you press the shutter button halfway down, the camera adjusts the focus automatically (Auto Focus). Remember to press the shutter button only halfway down.

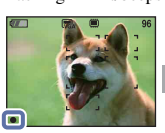
Do not fully press the shutter button straight away.



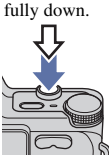
Press the shutter button halfway down.



AE/AF lock indicator flashing ➡ lit/beeps



Then press the shutter button fully down.



When focusing is difficult → [Focus] (page 47)
If the image looks blurred even after focusing, it may be because of camera shake. → See “Hints for preventing blur” below.

Hints for preventing blur

The camera moved accidentally when you took the image. This is called “Camera shake.” On the other hand, if the subject moved when you took the image, it is called “subject blur.”

Camera shake





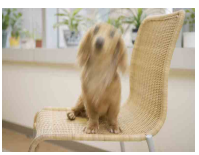
Cause

Your hands or body shake while you hold the camera and press the shutter button, and the entire screen is blurred.

What you can do to reduce the blurring

- Use a tripod or place the camera on a flat surface to hold the camera steady.
- Shoot with a 2-second delay self-timer and stabilize the camera by holding your arms firmly at your side after pressing the shutter button.

Subject blur





Cause

Even though the camera is steady, the subject moves during the exposure so the subject looks blurred when the shutter button is pressed.

What you can do to reduce the blurring

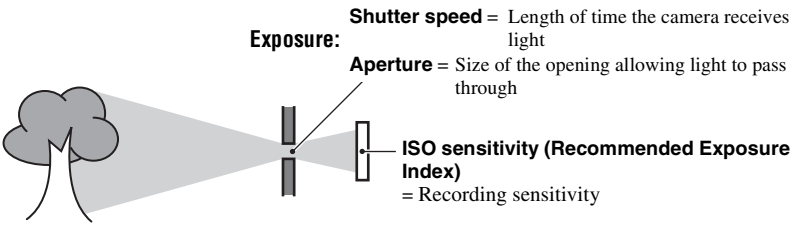
- Select ISO (High Sensitivity mode) in Scene Selection.
- Select a higher ISO sensitivity to make the shutter speed faster, and press the shutter button before the subject moves.

Notes

- The anti-blur function is enabled in the factory default settings so that camera shake is reduced automatically. However, this is not effective for subject blur.
- Besides, camera shake and subject blur occur frequently under low-light or slow shutter speed conditions, such as those encountered in (Twilight mode) or (Twilight Portrait mode). In that case, shoot with the above tips in mind.

Exposure *Adjusting the light intensity*

You can create various images by adjusting the exposure and the ISO sensitivity. Exposure is the amount of light that the camera will receive when you release the shutter.





Overexposure
= too much light
Whitish image



Correct exposure



Underexposure
= too little light
Darker image

The exposure is automatically set to the proper value in the auto adjustment mode. However, you can adjust it manually using the functions below.

Manual exposure:
Allows you to adjust the shutter speed and aperture value manually (page 31).

Adjusting EV:
Allows you to adjust the exposure determined by the camera (pages 21, 45).

Metering Mode:
Allows you to change the part of the subject to be measured to determine the exposure (page 46).

Adjusting ISO Sensitivity (Recommended Exposure Index)

ISO sensitivity is a speed rating for recording media that incorporates an image sensor that receives light. Even when the exposure is the same, images differ depending on the ISO sensitivity.
To adjust the ISO sensitivity, see page 45.



High ISO sensitivity
Records a bright image even in dark locations while increasing shutter speed to reduce blur.
However, the image tends to become noisy.

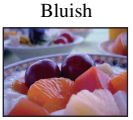
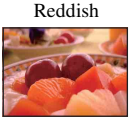


Low ISO sensitivity
Records a smoother image.
However, when the exposure is insufficient, the image may become darker.

Color — On the effects of lighting

The apparent color of the subject is affected by the lighting conditions.

Example: The color of an image affected by light sources

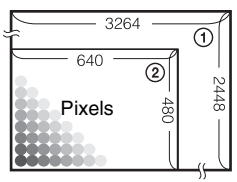
Weather/lighting	Daylight	Cloudy	Fluorescent	Incandescent
Characteristics of light	White (standard) 	Bluish 	Green-tinged 	Reddish 

The color tones are adjusted automatically in the auto adjustment mode.
However, you can adjust color tones manually with [White Bal] (page 49).

Quality — *On “image quality” and “image size”*

A digital image is made up of a collection of small dots called pixels.
If it contains a large number of pixels, the image becomes large, it takes up more memory, and the image is displayed in fine detail. “Image size” is shown by the number of pixels. Although you cannot see the differences on the screen of the camera, the fine detail and data processing time differ when the image is printed or displayed on a computer screen.

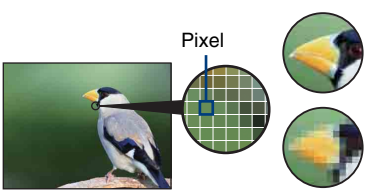
Description of the pixels and the image size



① Image size: 8M
3264 pixels × 2448 pixels = 7,990,272 pixels

② Image size: VGA
640 pixels × 480 pixels = 307,200 pixels

Selecting the image size for use (page 12)



Many pixels (Fine image quality and large file size) → Example: Printing in up to A3 size

Few pixels (Rough image quality but small file size) → Example: An attached image to be sent by e-mail

The default settings are marked with ✓.

	Image size	Usage guidelines	No. of images	Printing
✓	8M (3264×2448)	For prints up to A3 (11×17")	Less  More	Fine  Rough
	3:2*1 (3264×2176)	Shoot in 3:2 aspect ratio		
	5M (2592×1944)	For prints up to A4 (8.5×11")		
	3M (2048×1536)	For prints up to 10×15 cm (4×6") or 13×18 cm (5×7")		
	VGA (640×480)	Shoot at a small image size for e-mail attachment		
	16:9*2 (1920×1080)	Shoot in HDTV aspect ratio		

*1) Images are recorded in 3:2 aspect ratio, same as photograph printing paper or postcards, etc.
*2) Both edges of the image may be cut off when printing (page 108).

	Movie image size	Frame/Second	Usage guidelines
	640(Fine) (640×480)	Approx. 30	Shoot high quality movie for display on TV
✓	640(Standard) (640×480)	Approx. 17	Shoot standard quality movie for display on TV
	320 (320×240)	Approx. 8	Shoot at a small size for email attachment

- The larger the image size, the higher the image quality.
- The higher the number of frames per second, the smoother the playback image.

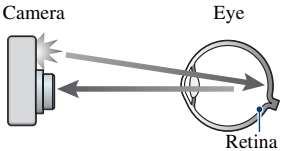
Flash

On using the flash

The eyes of the subject may come out red, or fuzzy white circular spots may appear when using the flash. These phenomena can be reduced by taking the following steps.

The “Red-eye phenomenon”

Pupils become dilated in dark environments. Flash light is reflected off the blood vessels at the back of the eye (retina), causing the “red-eye” phenomenon.



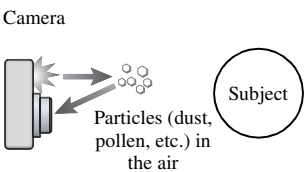


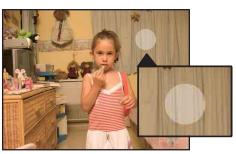
How can the “Red-eye phenomenon” be reduced?

- Set [Red Eye Reduction] to [On] (page 50).
- Select ISO (High Sensitivity mode)* in Scene Selection (page 29). (The flash is turned off automatically.)
- When the eyes of the subject turn out red, correct the image with [Retouch] on the viewing menu (page 56) or with the supplied software “Picture Motion Browser”.

“White circular spots”

This is caused by particles (dust, pollen, etc.) floating close to the lens. When they are accentuated by the camera’s flash, they appear as white circular spots.





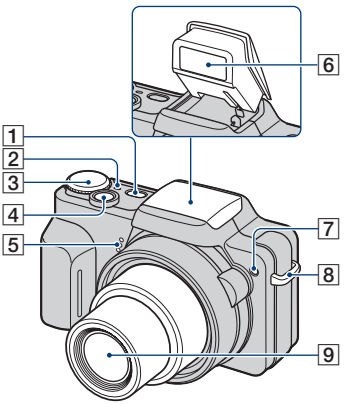
How can the “White circular spots” be reduced?

- Light the room and shoot the subject without a flash.
- Select ISO (High Sensitivity mode)* in Scene Selection. (The flash is turned off automatically.)

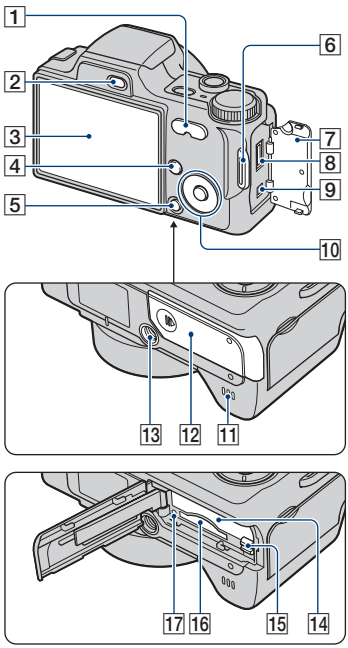
* Even though you selected ISO (High Sensitivity mode) in Scene Selection, the shutter speed might be slower under low-light conditions, or in a dark place. In that case, use a tripod or hold your arms firmly at your side after pressing the shutter button.

Identifying parts

See the pages in parentheses for details of operation.



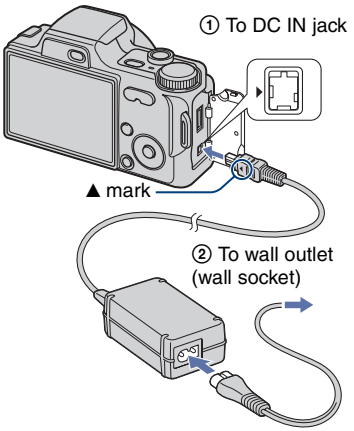
1 POWER button
2 POWER lamp
3 Mode dial (23)
4 Shutter button (24)
5 Microphone
6 Flash (26)
7 AF illuminator (70)/Self-timer lamp (27)
8 Hook for shoulder strap
9 Lens



1 For shooting: W/T (Zoom) button (25)
For viewing: ⊖/⊕ (Playback zoom) button/▪ (Index) button (33, 34)
2 ▶ (Playback) button (33)
3 LCD screen (21)
4 MENU button (39)
5 HOME button (37)
6 Hook for shoulder strap
7 Jack cover
8 Multi connector
Used in the following situations:
- Making a USB connection between the camera and the computer.
- Making a connection to audio/video input jacks on a TV.
- Making a connection to a PictBridge compliant printer.

9 DC IN jack

When using an AC-LS5K AC Adaptor (not supplied)



- You cannot charge the battery pack by connecting the camera to the AC-LS5K AC Adaptor. Use the battery charger (supplied) to charge the battery pack.

10 Control button
Menu on: ▲/▼/◄/►/● (39)
Menu off: DISP/⏲/✿/ϟ (21, 26)
When the mode dial is set to M:
Shutter Speed/Aperture (31)

11 Speaker (bottom)

12 Battery/“Memory Stick Duo” cover (bottom)

13 Tripod receptacle (bottom)

- Use a tripod with a screw less than 5.5 mm (7/32 inch) long. Otherwise, you cannot firmly secure the camera, and damage to the camera may occur.

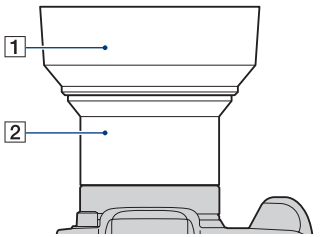
14 Battery insertion slot

15 Battery eject lever

16 “Memory Stick Duo” slot

17 Access lamp

Lens hood/Adaptor ring



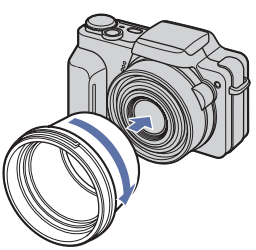
1 Lens hood

2 Adaptor ring

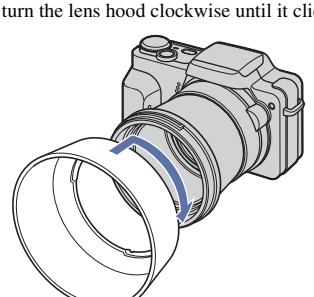
Attaching the lens hood

When you shoot in bright lighting conditions, such as outdoors, we recommend that you use the lens hood to reduce the image quality deterioration caused by unnecessary light.

① Attach the adaptor ring while the power is off.



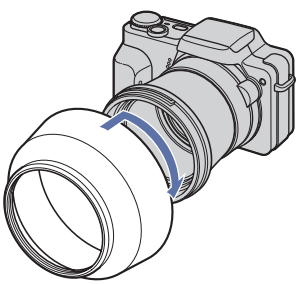
② Position the lens hood as shown below and turn the lens hood clockwise until it clicks.



- You can attach the lens cap with the lens hood attached.
- When using the lens hood, be careful that the following:
 - The AF illuminator light may be blocked.
 - The flash light may be blocked, causing the shadow to appear when using the built-in flash.

Storing the lens hood

The lens hood can be attached in the reverse direction to store it with the camera when it is not in use.
Position the lens hood as shown below and turn the lens hood clockwise until it clicks.



Attaching a conversion lens (not supplied)

When you want to do enhanced wide-angle shots or zoom-in shots on distant objects, attach a conversion lens.

① Attach the adaptor ring.

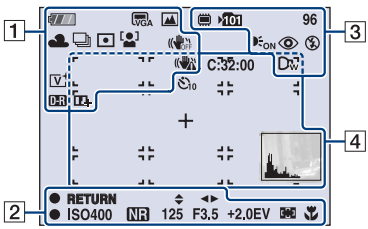
② Attach a conversion lens.

- When shooting with the conversion lens, go through the settings of [Conversion Lens] (page 72).
- Refer also to the operating instructions supplied with your conversion lens.

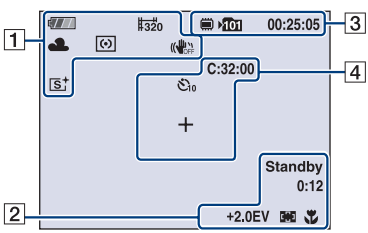
Indicators on the screen

Each time you press ▲ (DISP) on the control button, the display changes (page 21).
See the pages in parentheses for details of operation.

When shooting still images



When shooting movies



1

Display	Indication
	Battery remaining
	Low battery warning (111)
8M 3:2 5M 3M VGA 16:9 FINE STD 320	Image size (41)
ISO	Mode dial/Menu (Scene Selection) (28)
P M	Mode dial (23)
WB	White balance (49)

Display	Indication
BRK ±0.3 BRK ±0.7 BRK ±1.0	Recording mode (43)
	Metering mode (46)
	Face Detection (42)
ON OFF	SteadyShot (52) • In the default setting, when the shutter button is pressed halfway down, one of these indicators appears, depending on the SteadyShot setting.
	Vibration warning • Indicates vibration may prevent you from shooting clear images due to insufficient lighting. Even if the vibration warning appears, you can still shoot images. However, we recommend that you turn on the anti-blur function, using the flash for better lighting or using a tripod or other means to stabilize the camera (page 8).
W T ×1,3 sQ PQ	Zoom scaling (25, 71)
V N S BW	Color mode (44)
D-R	Contrast (51)
	Sharpness (51)

2

Display	Indication
◄►	Manual exposure setting mode (31)
● RETURN ● SET	Function guide for Manual exposure (31)
1.0m	Focus preset distance (47)
●	AE/AF lock (24)
Standby REC	Standby a movie/Recording a movie
ISO400	ISO number (45)
NR	NR slow shutter • When the shutter speed becomes slower than a certain speed in low light conditions, the NR (Noise Reduction) slow shutter function is activated automatically to reduce the image noise.
125	Shutter speed
F3.5	Aperture value
+2.0EV	Exposure Value (45)
0:12	Recording time (minutes : seconds)
	AF range finder frame indicator (47)
	Macro (26)

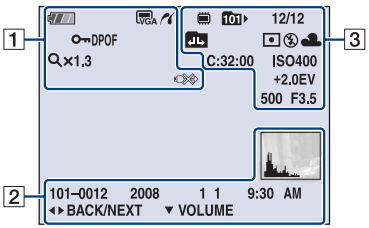
3

Display	Indication
	Recording Media (“Memory Stick Duo”, Internal memory)
101	Recording folder (63) • This does not appear when using internal memory.
96	Number of recordable images
00:25:05	Recordable time (hours : minutes : seconds)
ON	AF illuminator (70)
	Red-eye reduction (50)
SL	Flash mode (26)
	Flash charging
	Conversion lens (72)

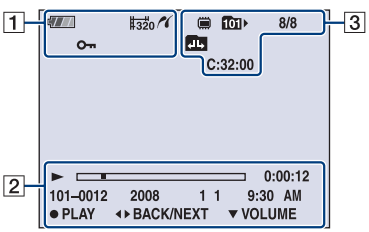
4

Display	Indication
C:32:00	Self-diagnosis display (111)
10 2	Self-timer (27)
+	Spot metering cross hair (46)
	AF range finder frame (47)
	Histogram (21)

When playing back still images



When playing back movies



1

Display	Indication
	Battery remaining
8M 6M 5M 3M VGA 16:9 FINE STD 320	Image size (41)
	Protect (58)
VOL.	Volume (33)
DPOF	Print order (DPOF) mark (99)
	PictBridge connecting (97)
×1,3	Zoom scaling (33)
	PictBridge connecting (98) • Do not disconnect the cable for multi-use terminal while the icon is displayed.

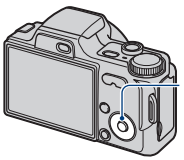
2

Display	Indication
	Playback (33)
	Playback bar
0:00:12	Counter
101-0012	Folder-file number (60)
2008 1 1 9:30 AM	Recorded date/time of the playback image
● STOP ● PLAY	Function guide for playing image
◄► BACK/ NEXT	Selecting images
▼ VOLUME	Adjusting volume
	Histogram (21) • ⊗ appears when histogram display is disabled.

3

Display	Indication
	Playback Media (“Memory Stick Duo”, Internal memory)
101	Playback folder (60) • This does not appear when using internal memory.
8/8 12/12	Image number/Number of images recorded in selected folder
	Changing folder (60) • This does not appear when using internal memory.
	Metering mode (46)
	Flash
AWB	White balance (49)
C:32:00	Self-diagnosis display (111)
ISO400	ISO number (45)
+2.0EV	Exposure Value (45)
500	Shutter speed
F3.5	Aperture value

Changing the screen display



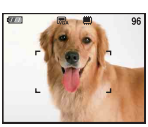
▲ (DISP) (Screen display) button

Each time you press ▲ (DISP) on the control button, the display changes as follows:

Indicators on



Indicators on*



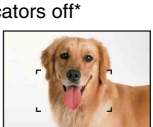
Histogram on*



During playback, the image information is displayed.

Histogram display (page 21)

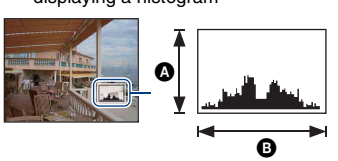
Indicators off*



* The brightness of the LCD Backlight up.

- If you view images in bright outside light, adjust the brightness of the LCD backlight up. However, the battery power may decrease faster under such condition.
- The histogram does not appear in the following situations:
 While shooting
 – When the menu is displayed.
 – When recording movies.
 During playback
 – When the menu is displayed.
 – In index mode.
 – When you are using playback zoom.
 – When you are rotating still images.
 – During playback of movies.
- A large difference in the histogram displayed during shooting and playback may occur when:
 – The flash strobes.
 – The shutter speed is slow or fast.
- The histogram may not appear for images recorded using other cameras.

Adjusting EV (Exposure Value) by displaying a histogram



A histogram is a graph showing the brightness of an image. Press ▲ (DISP) on the control button repeatedly to display the histogram on the screen. The graph display indicates a bright image when skewed to the right side, and a dark image when skewed to the left side.

Ⓐ Number of pixels

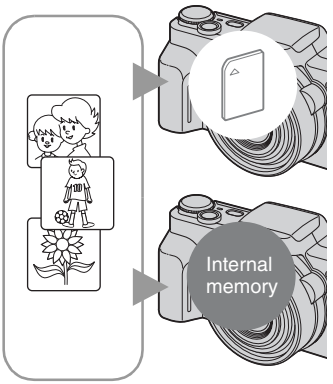
Ⓑ Brightness

- The histogram also appears when playing back a single image, but you cannot adjust the exposure.

Using the internal memory

The camera has approximately 31 MB of internal memory. This memory is not removable. Even when there is no “Memory Stick Duo” inserted in the camera, you can record images using this internal memory.

• Movies with the image size set to [640(Fine)] cannot be recorded using the internal memory.



When a “Memory Stick Duo” is inserted

[Recording]: Images are recorded on the “Memory Stick Duo”.

[Playback]: Images on the “Memory Stick Duo” are played back.

[Menu, Settings, etc.]: Various functions can be performed on images on the “Memory Stick Duo”.

When there is no “Memory Stick Duo” inserted

[Recording]: Images are recorded using the internal memory.

[Playback]: Images stored in the internal memory are played back.

[Menu, Settings, etc.]: Various functions can be performed on images in the internal memory.

On image data stored in the internal memory

We recommend that you copy (back up) data without error using one of the following methods.

To copy (back up) data on a “Memory Stick Duo”

Prepare a “Memory Stick Duo” with sufficient free capacity, then perform the procedure explained in [Copy] (page 65).

To copy (back up) data on a hard disk of your computer

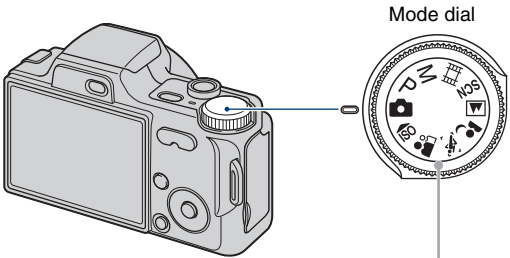
Perform the procedure on pages 84, 85 or 88, 89 without a “Memory Stick Duo” inserted in the camera.

• You cannot copy image data on a “Memory Stick Duo” to the internal memory.

• By connecting the camera to a computer with a cable for multi-use terminal, you can copy data stored in the internal memory to a computer. However you cannot copy data on a computer to the internal memory.

Using the mode dial

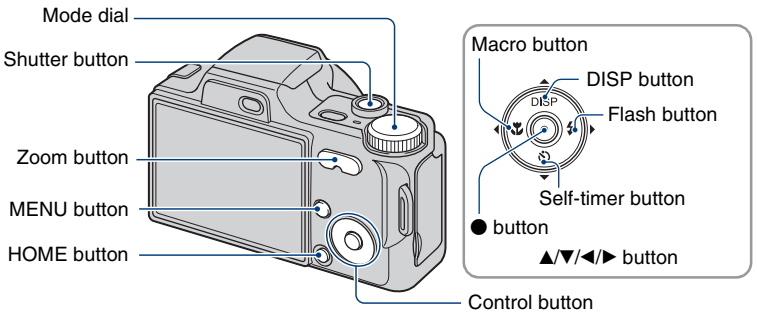
Set the mode dial to the desired function.



:	**Auto Adjustment mode** Allows easy shooting with the settings adjusted automatically. → page 24
P :	**Program Auto mode*** Allows you to shoot with the exposure adjusted automatically (both the shutter speed and the aperture value).
M :	**Manual Exposure Shooting mode*** Allows you to shoot after adjusting the exposure manually (both the shutter speed and the aperture value). → page 31
:	**Movie recording mode** Allows you to record movies with audio. → page 24
/// /SCN:	**Scene Selection mode** Allows you to shoot with preset settings according to the scene. You can select , , , in the menu when the mode dial is set to SCN. → page 28

* You can select various setting using the menu. (For details on the functions available → page 40)

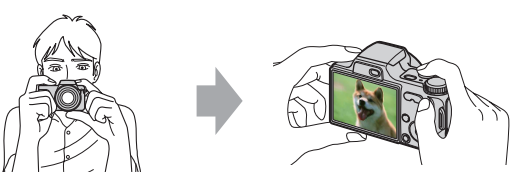
Shooting images easily (Auto Adjustment mode)



1 Select the desired function from the mode dial.

When shooting still images (Auto Adjustment mode): Select .
When shooting movies: Select .

2 Hold the camera, with your elbows pressed against your body to steady it.



Position the subject in the center of the focus frame.

3 Shoot with the shutter button.

When shooting still images:

①Press and hold the shutter button halfway down to focus.

The ● (AE/AF lock) indicator (green) flashes, a beep sounds, the indicator stops flashing and remains lit.



AE/AF lock

②Press the shutter button fully down.

When shooting movies:

Press the shutter button fully down.
To stop recording, press the shutter button fully down again.

If you shoot a still image of a subject that is difficult to focus on

- The shortest shooting distance is approx. 50 cm (1feet 7 3/4 inches) (W)/90 cm (2 feet 11 1/2 inches) (T) (from the lens). Shoot in the close-up (Macro) mode when you shoot a subject closer than the shooting distance (page 26).
- When the camera cannot focus on the subject automatically, the AE/AF lock indicator changes to flash slowly and the beep does not sound. In addition, the AF range finder frame disappears. Recompose the shot and focus again.

Focusing may be difficult in the following situations:

– It is dark and the subject is distant.
– The contrast between the subject and the background is poor.
– The subject is seen through glass.
– The subject is moving quickly.
– There is reflective light or shiny surfaces.
– The subject is backlit or there is a flashing light.

W/T Using the zoom

Press T to zoom, press W to undo the zoom.
Pressing the button slightly zooms slowly and pressing the button fully down zooms fast.

- When the zoom scale exceeds 10×, the camera uses the Digital Zoom function.
 For details on the [Digital Zoom] settings and the image quality, see page 71.
- You cannot change the zoom scale while shooting a movie.

Flash (Selecting a flash mode for still images)

Press ► (⚡) on the control button repeatedly until the desired mode is selected.



(No indicator): Flash Auto

Flashes when there is insufficient light or backlight (default setting).

⚡: Flash forced on

⚡SL: Slow synchro (Flash forced on)

The shutter speed is slow in a dark place to clearly shoot the background that is out of flash light.

⊘⚡: Flash forced off

- The flash automatically pops up and strobes when using the flash. Close the flash by hand after use.
- The flash strobes twice. The first flash adjusts the light quantity.
- While charging the flash, ⚡● is displayed.

Macro (Shooting close-up)

Press ◄ (🌷) on the control button repeatedly until the desired mode is selected.



(No indicator): Macro Off

🌷: Macro On (W side: Approx. 2 cm or farther (13/16 inches or farther) from the lens, T side: Approx. 90 cm or farther (2 feet 11 1/2 inches or farther) from the lens)

- Setting the zoom all the way to the W side is recommended.
- The in-focus range becomes narrow, and the subject may not be entirely in focus.
- The Auto Focus speed drops when you shoot images in the Macro.

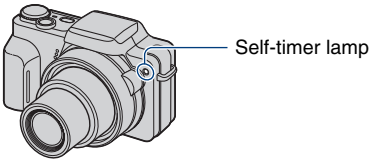
Using the self-timer

Press ▼ (Self-timer) on the control button repeatedly until the desired mode is selected.



(No indicator): Not using the self-timer
Self-timer (10 sec): Setting the 10-second delay self-timer
Self-timer (2 sec): Setting the 2-second delay self-timer

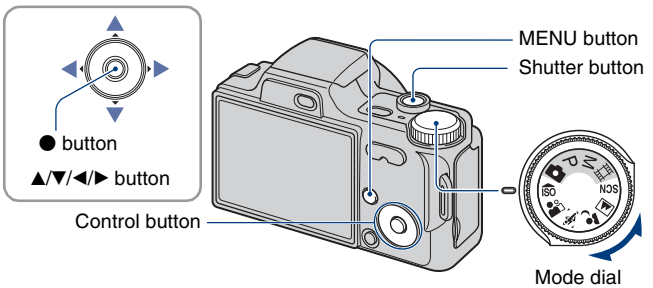
When you press the shutter button, the self-timer lamp flashes and a beep sounds until the shutter operates.



To cancel, press ▼ (Self-timer) again.

- Use the 2-second delay self-timer to prevent blur of an image. The shutter is released 2 seconds after you press the shutter button, which reduces camera shake when the shutter button is pressed.

Shooting still images (Scene Selection)



Select the mode (ISO/ /SCN) in the mode dial

1 **Select the desired mode of Scene Selection (ISO/ /SCN) with the mode dial.**

2 **Shoot with the shutter button.**

Select the mode (/ / /) in SCN

1 **Select SCN with the mode dial.**

2 **Press MENU, and select from / / / with ◄/► on the control button (page 41).**

3 **Shoot with the shutter button.**

- For details on the mode, see next page.

To cancel the Scene selection

Set the mode dial to anything other than the Scene Selection mode.

Scene Selection modes

The following modes are preset to match the scene conditions.

Modes selected from the mode dial



ISO High Sensitivity

Allows you to shoot images without a flash under low light conditions, reducing blur.



Soft Snap

Allows you to shoot images with a softer atmosphere for portraits and flowers, etc.



Advanced Sports Shooting

Suitable for shooting scenes with fast movements such as sports.

- While the shutter is pressed halfway down, the movement of the subject is predicted and the focus will be adjusted.



Twilight Portrait*

Allows you to shoot sharp images of people with the night view in the background without compromising the atmosphere.



Landscape

Focuses only on a distant subject to shoot landscapes, etc.

Modes selected from the menu screen



Twilight*

Allows you to shoot night scenes at far distance without losing the dark atmosphere of the surroundings.



Beach

Allows you to record the blue of the water clearly when shooting seaside or lakeside scenes.



Snow

Allows you to record clear images preventing sunken colors in snowy scenes or other places where the whole screen appears white.



Fireworks*

Allows you to record fireworks in all their splendor.

- If you shoot images with conversion lens (not supplied) you may not be able to record fire works in all splendor.

* When you shoot images using (Twilight Portrait), (Twilight) or (Fireworks) mode, the shutter speed becomes slower, and blurring is occur frequently, so use of a tripod is recommended.

Functions you can use in Scene Selection

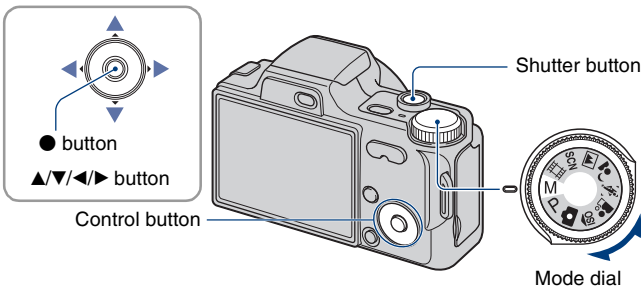
For shooting an image appropriately according to the scene condition, a combination of functions is determined by the camera. Some functions are not available, depending on the Scene Selection mode.

(✓: you can select the desired setting)

	ISO								
Macro	✓	✓	—	✓	—	—	✓	✓	—
Flash	✓	✓	—	✓SL	✓ / ✓	✓	✓ / ✓	✓ / ✓	✓
Face Detection	—	✓	—	—	—	—	—	—	—
Burst/Bracket	—	✓	✓	—	✓	—	✓	✓	—
EV	✓	✓	✓	✓	✓	✓	✓	✓	✓
White Bal	✓*	—	—	—	—	—	—	—	—
Red Eye Reduction	—	✓	—	✓	✓	—	✓	✓	—
SteadyShot	✓	✓	✓	✓	✓	✓	✓	✓	✓
Self-timer	✓	✓	—	✓	✓	✓	✓	✓	✓

* [Flash] for [White Bal] cannot be selected.

Shooting with the manual exposure



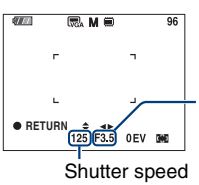
1 Select M from the mode dial and press ● on the control button.

- [SET] changes to [RETURN] on the lower left of the screen and the camera is set to manual exposure setting mode.

2 Adjust the exposure manually using the control button.

◀/▶: Aperture (F value)

▲/▼: Shutter speed

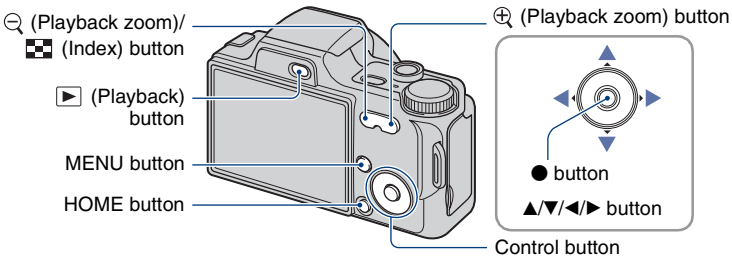


- Select an aperture value as follows:
 - – When the zoom is set fully to the W side, you can select an aperture F3.5 or F8.0 (using the internal ND filter).
 - – When the zoom is set fully to the T side, you can select an aperture F4.4 or F10 (using the internal ND filter).
- You can select a shutter speed from 30 to 1/2,000 seconds.
- The difference between the settings and proper exposure judged by the camera appears as an EV value (page 45) on the screen. 0EV indicates the value judged as the most suitable by the camera.

3 Shoot with the shutter button.

- To select a flash mode, shoot in Macro mode/self-timer mode, or change the screen display mode, press ● to cancel Manual Exposure Shooting mode ([RETURN] changes to [SET] on the screen.).
- The flash is set to ϟ (Flash On) or ⊗ (Flash Off).
- When the shutter speed is one second or slower, the shutter speed is indicated by ["], for example, [1"].
- When you set the shutter speed slower, using a tripod is recommended to prevent the effects of vibration.
- When the shutter speed becomes slower than a certain speed, the NR slow shutter function is activated automatically to reduce image noise, and [NR] appears on the screen.
- If you select slow shutter speeds, it takes time to process the data.

Viewing images



1 Press ▶ (Playback).

- If you press ▶ (Playback) when the camera is powered off, the camera is turned on automatically and set to playback mode. To switch to the shooting mode, press ▶ (Playback) again.

2 Select an image with ◄/► on the control button.

Movie:

Press ● to play back a movie. (Press ● again to stop playback.)

Press ► to fast forward, ◄ to rewind. (Press ● to return to normal playback.)

Press ▼ to display the volume control screen, then press ◄/► to adjust the volume.

- Movies of image size [320] are displayed in a smaller size.

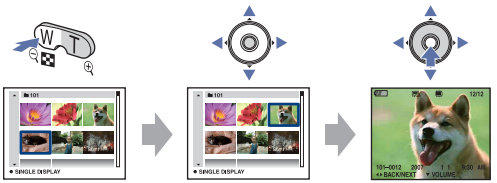
To view an enlarged image (playback zoom)

Press ⊕ while displaying a still image.
To undo the zoom, press ⊖.
Adjust the position with ▲/▼/◄/►.
To cancel the playback zoom, press ●.

- To store enlarged images, see [Trimming] (page 58).

To view an index screen

Press (Index) to display the index screen while a still image is displayed.
Select an image with ▲/▼/◀/►.
To return to the single image screen, press ●.

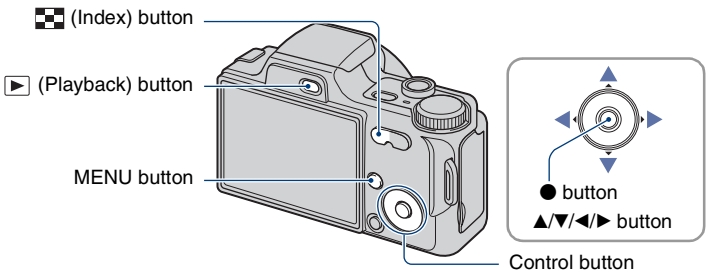


- You can also access the index screen by selecting [Index Display] from (View Images) on the HOME screen.
- Each time you press (Index), the number of images on the index screen increases.
- When using the “Memory Stick Duo”, and there are several folders, select the folder selection bar with ◀, then select the desired folder with ▲/▼.



Folder Selection bar

Deleting images



1 **Press ▶ (Playback).**

2 **Press MENU while displaying in single-image or index mode.**

3 **Select 🗑 [Delete] with ▲ on the control button.**



4 **Select the desired deletion method with ◀/▶ from among [This Image], [Multiple Images] and [All In This Folder], then press ●.**

When you select [This Image]

You can delete the selected image.
Select [OK] with ▲, then press ●.

When you select [Multiple Images]

You can select and delete multiple images simultaneously.

① Select the images you want to delete, then press ●.
The ✓ mark is checked in the checkbox of the image.

Single Image



Index Display



② Press MENU.

③ Select [OK] with ▲, then press ●.

When you select [All In This Folder]

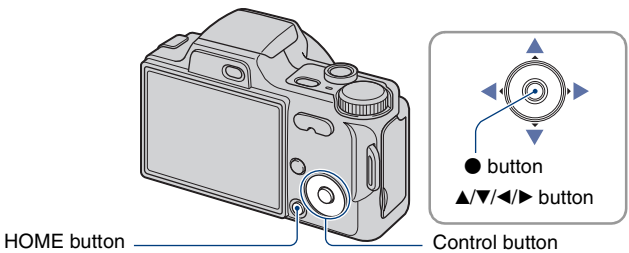
You can delete all the images in a selected folder.
Select [OK] with ▲, then press ●.

- You can also delete all images in a folder after selecting [Multiple Images] on the index screen. Select the folder selection bar with ◀ and attach a ✓ mark to the folder.

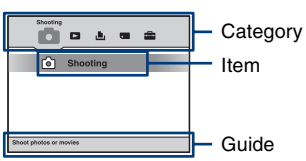
Learning the various functions – HOME/Menu

Using the HOME screen

The HOME screen is the gateway screen for all the functions of the camera, and can be called up regardless of the mode setting (shooting/viewing).



1 Press HOME to display the HOME screen.



2 Select a category with ◀/▶ on the control button.

3 Select an item with ▲/▼, then press ●.

- You cannot display the HOME screen when a PictBridge connection or a USB connection is made.
- The camera is set to the shooting or viewing mode by pressing HOME again.

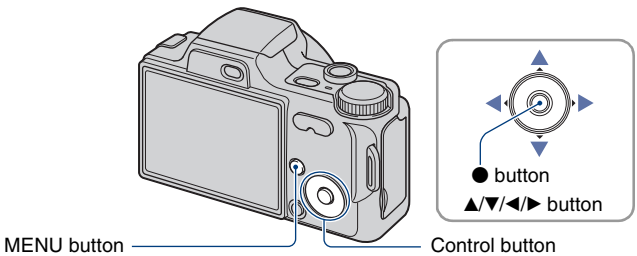
HOME items

Pressing HOME displays the following items. Details on the items are displayed on the screen by the guide.

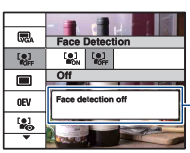
Categories	Items
Shooting*	Shooting (page 23)
View Images	Single Image (page 53)
	Index Display (page 53)
	Slide Show (page 53)
Printing, Other	Print (page 96)
	Music Tool (page 91) Download Music / Format Music
Manage Memory	Memory Tool
	Memory Stick Tool (page 63) Format / Create REC. Folder Change REC. Folder / Copy
	Internal Memory Tool (page 66) Format
Settings	Main settings
	Main Settings 1 (page 67) Beep / Function Guide Initialize
	Main Settings 2 (page 68) USB Connect / COMPONENT Video Out
	Shooting Settings
	Shooting Settings 1 (page 70) AF Illuminator / Grid Line AF Mode / Digital Zoom Conversion Lens
	Shooting Settings 2 (page 73) Auto Orientation / Auto Review
	Clock Settings (page 74)
	Language Setting (page 75)

* Shooting mode selected with the mode dial will be applied.

Using the menu items



1 Press MENU to display the menu.



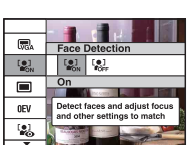
Function Guide
Setting [Function Guide] to [Off] turns off the function guide (page 67).

- The menu will be displayed only during shooting and playback mode.
- Different items will become visible depending on the selected mode.

2 Select a desired menu item with ▲/▼ on the control button.

- If the desired item is hidden, keep pressing ▲/▼ until the item appears on the screen.

3 Select a setting with ◀/▶.



- If the desired setting is hidden, keep pressing ◀/▶ until the setting appears on the screen.
- Select an item in playback mode, and press ●.

4 Press MENU to turn off the menu.

Menu items

The available menu items vary depending on the mode setting (shooting/viewing), and the mode dial position in the shooting mode. Only the available items are displayed on the screen.

(✓: available)

Mode dial position:		P	M	Scene	

Shooting menu (page 41)

Scene Selection	—	—	—	✓*	—
Image Size	✓	✓	✓	✓	✓
Face Detection	✓	—	—	✓*	—
REC Mode	✓	✓	✓	✓*	—
Color Mode	—	✓	✓	—	✓
ISO	—	✓	✓	—	—
EV	✓	✓	—	✓	✓
Metering Mode	—	✓	✓	—	✓
Focus	—	✓	✓	—	✓
White Bal	—	✓	✓	✓*	✓
Flash Level	—	✓	✓	—	—
Red Eye Reduction	✓	✓	✓	✓*	—
Contrast	—	✓	✓	—	—
Sharpness	—	✓	✓	—	—
SteadyShot	—	✓	✓	✓	✓
SETUP	✓	✓	✓	✓	✓

* The operation is limited according to the selected Scene Selection mode (page 29).

Viewing menu (page 56)

(Delete)	(Slide Show)
(Retouch)	(Protect)
DPOF	(Print)
(Rotate)	(Select Folder)

Shooting menu

The functions in shooting mode using MENU are described below.
For details on how to operate the menu, see page 39.

The selectable mode is displayed in white.



Unavailable

Modes selected from the menu screen when the mode dial is set to SCN

The default settings are marked with ✓.

Scene Selection: Selecting the scene selection

Selects the scene selection in the menu.
You can shoot images with the settings pre-adjusted to match various scene conditions (page 28).

Image Size: Selecting the image size

For still images

✓	8M	Selects image size for shooting still images. For details, see pages 11, 12.
	3:2	
	5M	
	3M	
	VGA	
	16:9	

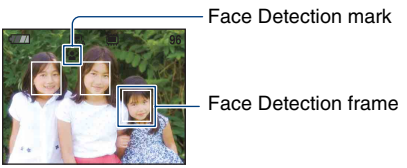
For movie

	FINE (Fine)	Selects image size for recording movies. For details, see page 12.
✓	STD (Standard)	
	320	

For details on the operation ☞ page 39

Face Detection: Detecting the face of subject

Selects whether to use the Face Detect function or not.

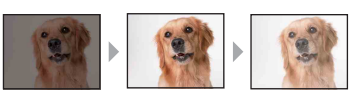
	(On)	Detects the faces of your subjects and adjusts the focus, flash, exposure, white balance and red-eye reduction settings automatically. 
✓	(Off)	Does not use Face Detection function.

- When [Face Detection] is set to [On]:
 - You cannot use the AF illuminator.
 - You cannot use the digital zoom.
- Available only for [Soft Snap], the default setting is [On].
- Up to 8 faces of your subjects can be detected. However, only up to 2 faces of your subjects can be detected when you shoot images with [Soft Snap].
- When the camera detects more than one subject, the camera will judge which is the main subject and set focus by priority.
- The frame for which the focus is set will turn green by pressing the shutter button halfway down. All the subjects at equal distance to the focused one are also focused, even if the frames do not turn green.
- Face Detection may not work properly, depending on conditions, such as:
 - When the exposure is too dark or too bright.
 - When a part of the face is hidden by objects, such as sunglasses, mask, or hat, etc.
 - When the face of your subject does not face the camera.

For details on the operation ☞ page 39

REC Mode: Selecting the continuous shooting method

Selects whether the camera performs continuous shooting or not when you press the shutter button.

✓	(Normal)	Does not shoot continuously.
	(Burst)	Records 100 images in succession when you press and hold down the shutter button.  • The flash is set to (Flash forced off).
	BRK ±0.3EV	Records a series of three images with the exposure values automatically shifted (Exposure Bracket). The larger the bracket step value, the larger the shift of the exposure value. • When you cannot decide the correct exposure, shoot in the Exposure Bracket mode, shifting the exposure value. You can select the image with the best exposure afterward.  • When the mode dial is set to , the Exposure Bracket mode is not available. • The flash is set to (Flash forced off).
	BRK ±0.7EV	
	BRK ±1.0EV	

On the Burst

- When recording with the self timer, a series of a maximum of five images is recorded.
- When recording with the mode dial set to M, you cannot select a shutter speed of 1/3 seconds or slower.
- The recording interval is approximately 0.5 seconds. The recording interval becomes longer, depending on the setting for the image size.
- When the battery level is low, or when the internal memory or “Memory Stick Duo” is full, the Burst stops.
- Focus, white balance, and exposure are fixed to the values set for the first shot.

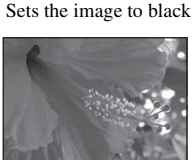
On the Exposure Bracket

- The focus and white balance are adjusted for the first image, and these settings are also used for the other images.
- When recording with the mode dial set to M, you cannot select a shutter speed of 1/3 seconds or slower.
- When you adjust the exposure manually (page 45), the exposure is shifted based on the adjusted brightness.
- The recording interval is the same as the Burst mode. The recording interval may be longer, depending on the scene conditions.
- If the subject is too bright or too dark, you may not be able to shoot properly with the selected bracket step value.

For details on the operation ☞ page 39

Color Mode: Changing the vividness of the image or adding special effects

You can change the brightness of the image, accompanied by effects.

✓	(Normal)	Sets the image to standard color. 
	(Vivid)	Sets the image to bright and deep color. 
	(Natural)	Sets the image to quiet color. 
	(Sepia)	Sets the image to sepia color. 
	(B & W)	Sets the image to black and white. 

• You can select only [Normal], [Sepia] or [B & W] when shooting movies.

ISO: Selecting a luminous sensitivity

P M



Low ISO sensitivity　　High ISO sensitivity

Selects the ISO sensitivity.

✓	ISO AUTO (Auto)	You can reduce image blurring in dark locations or moving subjects by increasing ISO sensitivity (select a larger number). However, images tend to become noisier as the ISO sensitivity number increases.Select an ISO sensitivity number according to shooting conditions.
	ISO 100	
	ISO 200	
	ISO 400	
	ISO 800	
	ISO 1600	
	ISO 3200	

- For details on the ISO sensitivity, see page 9.
- You can select only from [ISO AUTO], [ISO 100] to [ISO 400] when set to Burst or Exposure Bracket.
- When shooting under bright conditions, the camera automatically enhances tones to prevent images appearing pale (excluding when [ISO] is set to [ISO 100].).

EV: Adjusting the light intensity

P M



Toward –　　Toward +

Manually adjusts the exposure.

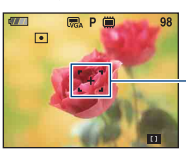
	–2.0EV	Toward –: Darkens an image.
✓	0EV	The exposure is determined automatically by the camera.
	+2.0EV	Toward +: Brightens an image.

- For details on the Exposure, see page 9.
- The compensation value can be set in 1/3EV increments.
- If you shoot a subject in extremely bright or dark conditions, or when you use the flash, the exposure adjustment may not be effective.

For details on the operation ☞ page 39

Metering Mode: Selecting the metering mode

Selects the metering mode that sets which part of the subject to measure to determine the exposure.

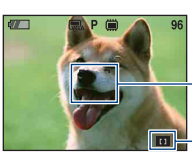
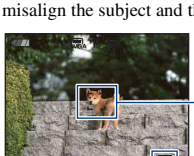
✓	(Multi)	Divides into multiple regions and measures each region. The camera determines a well-balanced exposure (Multi-pattern metering).
	(Center)	Measures the center of the image, and determines the exposure based on the brightness of the subject there (Center-weighted metering).
	(Spot) (Only for still image)	Measures only a part of the subject (Spot metering). • This function is useful when the subject is backlit or when there is strong contrast between the subject and the background.  Spot metering cross hairs Positions on the subject

- For details on the Exposure, see page 9.
- When using spot metering or center-weighted metering, setting [Focus] to [Center AF] is recommended to focus on the metering position (page 47).

Focus: Changing the focus method

P M

You can change the focus method. Use the menu when it is difficult to get the proper focus in auto focus mode.

✓	(Multi AF)	Focuses on a subject in all ranges of the finder frame automatically. • This mode is useful when the subject is not in the center of the frame.  AF range finder frame (Only for still image) AF range finder frame indicator
	(Center AF) (Only for still image)	Focuses on a subject in the center of the finder frame automatically. • Using the AF lock function together, you can compose the image the way you want.  AF range finder frame AF range finder frame indicator
	(Spot AF) (Only for still image)	Focuses on an extremely small subject or a narrow area automatically. • Using the AF lock function together, you can compose the image the way you want. Hold the camera steady so as not to misalign the subject and the AF range finder frame.  AF range finder frame AF range finder frame indicator

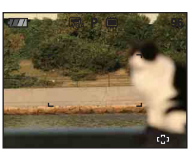
For details on the operation ☞ page 39

	0.5 m	Focuses on the subject using a previously set distance to the subject. (Focus preset) • Use “Focus preset” when it is difficult to get sharp focus with automatic focusing, such as when shooting a subject through a net or window.
	1.0 m	
	3.0 m	
	7.0 m	
	∞ (unlimited distance)	

- AF stands for Auto Focus.
- Allow a margin of error in the distance setting of “Focus preset”. Setting the zoom to the T side or pointing the lens up or down will increase error.
- When you use Digital Zoom or AF illuminator, the AF range finder frame is disabled and appears in a dotted line. In this case, the camera works to focus on the subjects at the center of the screen.

If the subject is out of focus

When shooting with the subject at the edge of the frame (or the screen), or when using [Center AF] or [Spot AF], the camera may not focus on a subject at the edge of the frame.



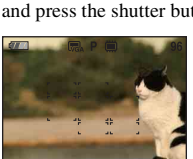
In such cases, do as follows:

① Recompose the shot so that the subject is centered in the AF range finder, and press the shutter button halfway down to focus on the subject (AF lock).



As long as you do not press the shutter button fully down, you can retry the procedure as many times as you want.

② When the AE/AF lock indicator stops flashing and remains on, return to the fully composed shot, and press the shutter button fully down.

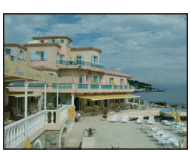


For details on the operation ☞ page 39

White Bal: Adjusting the color tones

P M

Adjusts color tones according to the surrounding light conditions. Use this function if image color appears unnatural.

✓	WB AUTO (Auto)	Adjusts the White Balance automatically.
	☀ (Daylight)	Adjusts for conditions outside under a clear sky, at sundown, night scenes, the presence of neon signs or fireworks. 
	☁ (Cloudy)	Adjusts for a cloudy sky or a shady location. 
	(Fluorescent Light 1)/ (Fluorescent Light 2)/ (Fluorescent Light 3)	[Fluorescent Light 1]: Adjusts for white fluorescent lighting. [Fluorescent Light 2]: Adjusts for natural white fluorescent lighting. [Fluorescent Light 3]: Adjusts for day white fluorescent lighting. 
	(Incandescent)	Adjusts for places under an incandescent lamp, or under bright lighting, such as in a photo studio. 

	(Flash)	Adjusts for the flash conditions. • You cannot select this item when shooting movies. 

- For details on the white balance, see page 10.
- Under fluorescent lights that flicker, the white balance function may not work correctly even though you select [Fluorescent Light 1], [Fluorescent Light 2] or [Fluorescent Light 3].
- Except in [Flash] mode, [White Bal] is set to [Auto] when you shoot images using the flash.

Flash Level: Adjusting the amount of flash light

P M

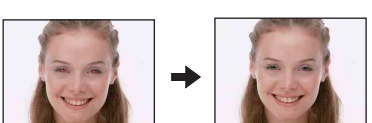
Adjusts the amount of flash light.

	+2.0EV	Toward +: Makes the flash level higher.
✓	0EV	The amount of flash light that the camera adjusts automatically.
	−2.0EV	Toward –: Makes the flash level lower.

- The flash level can be set in 1/3 EV increments.
- The value is not displayed on the screen. It is indicated as $\pm$ or $-$.
- To change flash mode, see page 26.
- If the subject is too bright or dark, this adjustment may have no effect.

Red Eye Reduction: Reducing the red-eye phenomenon

P M



The flash strobes two or more times before shooting to reduce the red-eye phenomenon when using the flash.

✓	(Auto)	The red-eye reduction flash strobes whenever necessary, only when using the Face Detection Function.
	(On)	The flash always strobes to reduce the red-eye phenomenon.
	(Off)	Does not use Red Eye Reduction.

- To avoid blurring of images, hold the camera firmly until the shutter is released. It usually takes a second after you press the shutter button. Be also sure not to allow the subject to move during this period.
- Red-eye reduction may not produce the desired effects. It depends on individual differences and conditions, such as distance to the subject, or if the subject looked away from the pre-strobe. In such a case, you can correct the red-eye using [Retouch] in the viewing menu after shooting (page 58).
- When the Face Detection function is not used, the red-eye reduction flash will not strobe even when [Auto] is selected.

Contrast: Adjusting the contrast

P M

Adjusts the contrast of the image.

	(–)	Toward –: Reduces the contrast.
	(Normal)	
	(+)	Toward +: Enhances the contrast.
✓	(DRO)	Adjusts the contrast of the image automatically. • When using flash, if [Metering Mode] is set to [Center] or [Spot], the contrast will not be adjusted automatically.

Sharpness: Adjusting the sharpness

P M

Adjusts the sharpness of the image.

	(–)	Toward –: Softens the image.
✓	(Normal)	
	(+)	Toward +: Sharpens the image.

For details on the operation ☞ page 39

SteadyShot: Selecting the anti-blur mode

Selects the anti-blur mode.

✓	(Shooting)	Activates the anti-blur function when pressing the shutter button halfway down.
	(Continuous)	Always activates the anti-blur function. You can stabilize images even when zooming up a far subject. • Battery consumption is faster than in [Shooting] mode.
	(Off)	Does not use anti-blur mode.

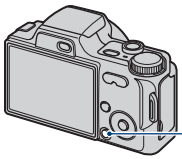
- In Auto Adjustment mode, [SteadyShot] is set to [Shooting].
- For movies, you can set [Continuous] or [Off] only. The default setting is set to [Continuous].
- The anti-blur function may not work properly in the following cases.
 - – When camera shake is too strong.
 - – When the shutter speed is slow, for example, shooting night scenes.

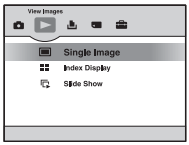
SETUP: Selecting the shooting settings

Selects the settings for the shooting function. The items appearing in this menu are the same ones as those in [Shooting Settings] on the HOME screen. See page 38.

Playing back images from the HOME screen

You can select the ways to playback images.





① Press HOME.

② Select ▶ (View Images) with ◀/▶ on the control button.

③ Select the desired viewing method with ▲/▼.

(Single Image): Playing back a single image

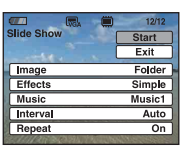
Displays the image shot last. This works in the same way as ▶ (Playback) (page 33).

(Index Display): Playing back a list of images

Displays a list of images in the selected folder. This works in the same way as (Index) (page 34).

(Slide Show): Playing back a series of images

① Select [Slide Show] on the HOME screen.



② Select [Start] with ▲/▼, then press ● to start playback.

To pause the slide show

Press ●.

To restart, select [Continue] with ▲/▼, then press ●.

- The slide show resumes from the image which was paused, however, the music starts again from the beginning.

To display the previous/next image

Press ◄/► while the slide show is paused.

To adjust the volume of the music

Press ▼ to display the volume control screen, and then press ◄/► to adjust the volume.

To end the slide show

Select [Exit] with ▲/▼ while the slide show is paused, then press ●.

To change the setup

The default settings are marked with ✓.

Image You can select only when you use a “Memory Stick Duo” (not supplied)		
✓	Folder	Plays back all the images in the selected folder.
	All	Plays back all the images in a “Memory Stick Duo” in order.

Effects		
✓	Simple	A simple slide show suitable for a wide range of scenes
	Nostalgic	A moody slide show reproducing the atmosphere of a movie scene
	Stylish	A stylish slide show proceeding at a middle tempo
	Active	A high-tempo slide show suitable for active scenes
	Normal	A basic slide show switching images at a preset interval

- When set to [Simple], [Nostalgic], [Stylish] or [Active] only still images are displayed.
- When [Normal] is selected, [Music] is fixed to [Off]. However, you can hear the sound of movies.

Music The music played is determined by default according to the effect you select. You can custom set any music with any effect as desired.		
✓	Music 1	The default setting for a [Simple] slide show
	Music 2	The default setting for a [Nostalgic] slide show
	Music 3	The default setting for a [Stylish] slide show
	Music 4	The default setting for a [Active] slide show
	Off	Setting for a [Normal] slide show. No Music available

Interval		
	3 sec	Sets the display interval of images for a [Normal] slide show.
	5 sec	
	10 sec	
	30 sec	
	1 min	
✓	Auto	The interval is set to suit the selected [Effects] item. The setting is fixed to [Auto] when [Normal] is not selected as the [Effects].

Repeat		
✓	On	Plays back images in a continuous loop.
	Off	After all the images have been played back, the slide show ends.

To add /change Music files

You can transfer a desired music file from your CDs or MP3 files to the camera to playback during Slide show. You can transfer music using [Music Tool] in (Printing, Other) on the HOME screen and the "Music Transfer" software (supplied) installed on a computer. For details, see pages 91 and 93.

- You can record up to four pieces of music on the camera (The four preset pieces (Music 1-4) can be replaced with the ones you transferred).
- A maximum length of each music file for music playback of the camera is about 3 minutes.
- If you cannot playback a music file due to damage or other malfunctions to the file, execute [Format Music] (page 91) and transfer the music again.

Viewing menu

For details on the operation ☞ page 39

This section explains the menu items available when you press MENU in playback mode. For details on how to use the menu, see page 39.

(Delete): Deleting images

Selects and deletes images on the single-image screen or the index screen, see page 35.

(This Image)	Deletes the image that is now selected.
(Multiple Images)	Selects and deletes multiple images.
(All In This Folder)	Deletes all the images in the selected folder.

(Slide Show): Playing back a series of images

This item has the same function as [Slide Show] on the HOME screen.
See page 53.

(Retouch): Retouching still images

Adds effects or makes corrections to a recorded image and records it as a new file. The original image is retained.

To retouch the still images

① Select the images you want to retouch while displaying in single-image or index mode.

② Press MENU.

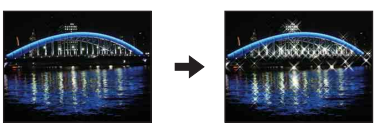
③ Select the [Retouch] with ▲/▼ on the control button, then press ● after select the desired mode with ◀/▶.

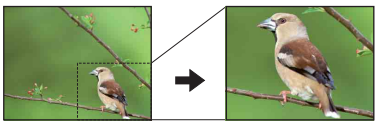
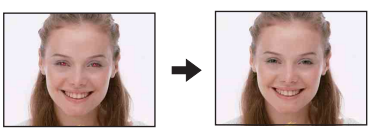
④ Retouch the images following the instructions for each retouching mode below.

• Images cannot be retouched while the camera is connected to a High Definition TV.

(Soft Focus)	Blurs the periphery around a chosen point to emphasize a subject.  ① Set the center point of the desired image to retouch with ▲/▼/◀/▶, then press MENU. ② Select [Level] with ▲ and press ●. Select level of retouch with ▲/▼, then press ● again. ③ Adjust the desired range to retouch with W/T. ④ Select [OK] with ▲/▼, then press ●.

For details on the operation ☞ page 39

(Partial Color)	Surrounds a chosen point in monochrome to signalize a subject.  ① Set the center point of the desired image to retouch with ▲/▼/◄/►, then press MENU. ② Adjust the desired range to retouch with W/T. ③ Select [OK] with ▲, then press ●.
(Fisheye Lens)	Applies a fisheye effect around a chosen point.  ① Set the center point of the desired image to retouch with ▲/▼/◄/►, then press MENU. ② Select [Level] with ▲ and press ●. Select level of retouch with ▲/▼, then press ● again. ③ Select [OK] with ▲/▼, then press ●.
(Cross Filter)	Adds starburst effects to light sources.  ① Select [Level] with ▲ and press ●. Select level of retouch with ▲/▼, then press ● again. ② Adjust the desired length to retouch with W/T. ③ Select [OK] with ▲/▼, then press ●.

(Trimming)	Playback zoom is performed on the image and part of the image is cropped.  ① Press W/T to zoom in on the trimming range. ② Set the point with ▲/▼/◀/▶, then press MENU. ③ Select [Image Size] with ▲ and press ●. Select an image size to record with ▲/▼, then press ● again. ④ Select [OK] with ▲/▼, then press ●. • The image size that you can trim may vary depending on the image. • The quality of trimmed images may deteriorate.
(Red Eye Correction)	Corrects the red-eye phenomenon caused by flash.  Select [OK] with ▲/▼, then press ●. • You may not be able to correct the red-eye phenomenon depending on the image.

(Protect): Preventing accidental erasure

Protects images against accidental erasure. The indicator appears on a protected image.

(This Image)	Protects/unlocks the currently selected image.
(Multiple Images)	Selects and protects/unlocks multiple images.

To protect an image

① Select the images you want to protect while displaying images in single-image or in index mode.
② Press MENU.
③ Select [Protect] with ▲/▼ on the control button, [This Image] with ◀/▶, and then press ●.



To select and protect images

① Press MENU in single-image mode or in index mode.

② Select [Protect] with ▲/▼, and select [Multiple Images] with ◀/▶, then press ●.

In single-image mode:

③ Select the image you want to protect with ◀/▶, then press ●.
The ✓ is attached to the selected image.

④ Press ◀/▶ to display other images you want to protect, then press ●.

⑤ Press MENU.

⑥ Select [OK] with ▲, then press ●.

In index mode:

③ Select the image you want to protect with ▲/▼/◀/▶, then press ●.
The ✓ is attached to the selected image.

④ To protect other images, repeat step ③.

⑤ To select all the images in a folder, select the folder selection bar with ◀, then press ●.
The ✓ is attached to the selected folder.

⑥ Press MENU.

⑦ Select [OK] with ▲, then press ●.

To cancel the protection

Select the image for which you want to cancel protection, and unlock it by performing the same procedure to protect it.
The (Protect) indicator disappears.

- Note that the formatting erases all the data stored on the recording media, even if the images are protected, and these images cannot be restored.
- It may take some time to protect an image.

DPOF: Adding a Print order mark

Adds a print order mark (DPOF) to the image you want to print.
See page 99.

DPOF (This Image)	Attaches a DPOF mark to the image being selected now. Clears the DPOF mark when the selected image has a DPOF mark.
DPOF (Multiple Images)	Selects images and attaches DPOF marks to them. Clears DPOF marks already attached.

(Print): Printing images using a printer

Printing images shot with the camera.
See page 96.

(Rotate): Rotating a still image



Rotates a still image.

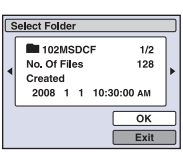
① Display the image to be rotated.
② Press MENU to display the menu.
③ Select [Rotate] with ▲/▼ on the control button, then press ●.
④ Select [↶ ↷], then rotate the image with ◀/▶.
⑤ Select [OK] with ▲/▼, then press ●.

- You cannot rotate protected images or movies.
- You may not be able to rotate images shot with other cameras.
- When viewing images on a computer, the image rotation information may not be reflected depending on the software.

(Select Folder): Selecting the folder for viewing images

Selects the folder containing the image you want to play back when using the camera with a "Memory Stick Duo".

① Select the desired folder with ◀/▶ on the control button.



② Select [OK] with ▲, then press ●.

To cancel selecting the folder

Select [Exit] in step ②, then press ●.

On the folders

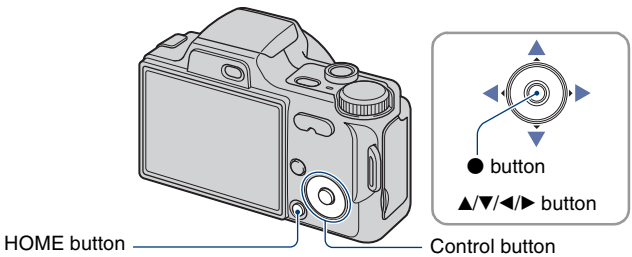
The camera stores images in a specified folder of a "Memory Stick Duo". You can change the folder or create a new one.

- To create a new folder → [Create REC. Folder] (page 63)
- To change the folder for recording images → [Change REC. Folder] (page 64)
- When multiple folders are created in the "Memory Stick Duo" and the first or last image in the folder is displayed, the following indicators appear.

: Moves to the previous folder
: Moves to the next folder
: Moves to either the previous or next folders

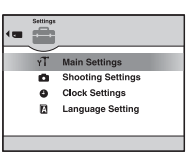
Customizing the Manage Memory feature and the Settings

You can change the default settings using (Manage Memory) or (Settings) on the HOME screen.



1 Press HOME to display the HOME screen.

2 Select (Manage Memory) or (Settings) with ◄/► on the control button.

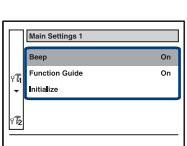


3 Select an item with ▲/▼, then press ●.

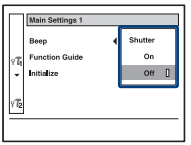
4 Select the desired item with ▲/▼.

- This is functional only when you select (Settings).

5 Press ► and select the desired setting with ▲/▼, then press ●.



6 Select a setting with ▲/▼, then press ●.



To cancel the setting change

Select [Cancel] if it is shown as an option on the screen, then press ●.
If not, press ◀.

- This setting is maintained even when the power is turned off.
- The camera is set to the shooting or viewing mode by pressing HOME again.

For details on the operation ☞ page 61

Memory Tool — Memory Stick Tool

This item appears only when a “Memory Stick Duo” is inserted in the camera.

Format

Formats the “Memory Stick Duo”. A commercially available “Memory Stick Duo” is already formatted, and can be used immediately.

- Note that formatting permanently erases all data on a “Memory Stick Duo”, including even protected images.

① Select [Format] with ▲/▼/◀/▶ on the control button, then press ●.
The message “All data on Memory Stick will be erased” appears.

② Select [OK] with ▲, then press ●.
Formatting starts.

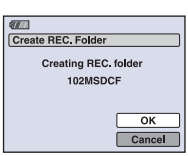
To cancel formatting

Select [Cancel] in step ②, then press ●.

Create REC. Folder

Creates a folder in a “Memory Stick Duo” for recording images.

① Select [Create REC. Folder] with ▲/▼/◀/▶ on the control button, then press ●.
The folder creation screen appears.



② Select [OK] with ▲, then press ●.
A new folder is created with a number incremented one higher than the largest number, and the folder becomes the current recording folder.

To cancel the folder creation

Select [Cancel] in step ②, then press ●.

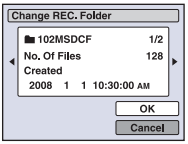
- When not creating a new folder, the “101MSDCF” folder is selected as the recording folder.
- You can create folders designated up to “999MSDCF”.
- You cannot delete a folder with the camera. To delete a folder, use your computer, etc.
- Images are recorded in the newly created folder until you create another folder or select another recording folder.
- Up to 4,000 images can be stored in one folder. When the folder capacity is exceeded, a new folder is automatically created.
- For details, see “Image file storage destinations and file names” (page 86).

For details on the operation ☞ page 61

Change REC. Folder

Changes the folder currently used for recording images.

① Select [Change REC. Folder] with ▲/▼/◀/▶ on the control button, then press ●.
The folder selection screen appears.



② Select the desired folder with ◀/▶, and [OK] with ▲, then press ●.

To cancel changing the recording folder

Select [Cancel] in step ②, then press ●.

- You cannot select the “100MSDCF” folder as a recording folder.
- You cannot move recorded images to another folder.

For details on the operation ☞ page 61

Copy

Copies all images in the internal memory to a "Memory Stick Duo".

① Insert a "Memory Stick Duo" having sufficient free capacity.

② Select [Copy] with ▲/▼/◄/► on the control button, then press ●.
The message "All data in internal memory will be copied" appears.

③ Select [OK] with ▲, then press ●.
Copying starts.

To cancel copying

Select [Cancel] in step ③, then press ●.

- Use a fully charged battery pack. If you attempt to copy image files using a battery pack with little remaining charge, the battery pack may run out, causing copying to fail or possibly corrupting the data.
- You cannot select images to copy.
- The original images in the internal memory are retained even after copying. To delete the contents of the internal memory, remove the "Memory Stick Duo" after copying, then format the internal memory ([Format] in [Internal Memory Tool]) (page 66).
- A new folder is created on the "Memory Stick Duo" and all the data will be copied to it. You cannot choose a specific folder and copy images to it.
- The DPOF (Print order) marks on the images are not copied.

For details on the operation ☞ page 61

Memory Tool — Internal Memory Tool

This item does not appear when a “Memory Stick Duo” is inserted in the camera.

Format

Formats the internal memory.

• Note that formatting permanently erases all data in the internal memory, including even protected images.

① Select [Format] with ▲/▼/◄/► on the control button, then press ●.
The message “All data in internal memory will be erased” appears.

② Select [OK] with ▲, then press ●.
Formatting starts.

To cancel formatting

Select [Cancel] in step ②, then press ●.

For details on the operation ☞ page 61

Main settings — Main Settings 1

The default settings are marked with ✓.

Beep

Selects the sound produced when you operate the camera.

	Shutter	Turns on the shutter sound when you press the shutter button.
✓	On	Turns on the beep/shutter sound when you press the control/shutter button.
	Off	Turns off the beep/shutter sound.

Function Guide

When you operate the camera, the function guide appears.

✓	On	Displays the function guide.
	Off	Does not display the function guide.

Initialize

Initializes the setting to the default setting. Even if you execute this function, the images stored in the internal memory are retained.

① Select [Initialize] with ▲/▼/◀/▶ on the control button, then press ●.
The message “Initialize all settings” appears.

② Select [OK] with ▲, then press ●.
The settings are reset to the default setting.

To cancel initializing

Select [Cancel] in step ②, then press ●.

• Be sure not to power off the camera while initializing.

Main settings — Main Settings 2

The default settings are marked with ✓.

USB Connect

Selects the USB mode when connecting the camera to a computer or a PictBridge compliant printer using the cable for multi-use terminal.

	PictBridge	Connects the camera to a PictBridge compliant printer (page 96). When you connect the camera to a computer, the copy wizard starts automatically, and the images in the recording folder on the camera are copied to the computer. (with Windows XP/Vista, Mac OS X)
	Mass Storage	Establishes a Mass Storage connection between the camera and a computer or other USB device (page 84).
✓	Auto	The camera recognizes automatically and sets up communication with a computer or PictBridge compliant printer (pages 84 and 96). • If you cannot connect the camera to a PictBridge compliant printer with the [Auto] setting, select [PictBridge]. • If you cannot connect the camera to a computer or a USB device with the [Auto] setting, select [Mass Storage].

COMPONENT

Selects the video signal output type from SD and HD(1080i), according to the TV connected see page 76.

✓	HD(1080i)	Select this item to connect the camera to a 1080i-capable High Definition TV.
	SD	Select this item to connect the camera to a TV that is not compatible with an HD(1080i) signal.

For details on the operation ☞ page 61

Video Out

Sets the video signal output according to the TV color system of the connected video equipment. The TV color systems differ depending on the country and region.
To view images on a TV screen, check the TV color system of the country or region of use (page 78).

NTSC	Sets the video output signal to NTSC mode (e.g., for the USA, Japan).
PAL	Sets the video output signal to PAL mode (e.g., for Europe).

Shooting Settings — Shooting Settings 1

The default settings are marked with ✓.

AF Illuminator

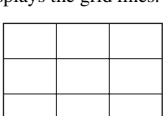
The AF illuminator supplies fill light to focus more easily on a subject in dark surroundings. The AF illuminator emits red light allowing the camera to focus easily when the shutter button is pressed halfway, until the focus is locked. The ON indicator appears at this time.

✓	Auto	Uses the AF illuminator.
	Off	Does not use AF illuminator.

- If the AF illuminator light does not reach the subject sufficiently or the subject has no contrast, focus will not be achieved. (A distance of up to approximately 3.0 m (9 feet 10 1/8 inches) (zoom: W)/2.9 m (9 feet 6 1/4 inches) (zoom: T) is recommended.)
- Focus is achieved as long as the AF illuminator light reaches the subject, regardless of whether light fails to reach the center of the subject.
- You cannot use the AF illuminator when:
 - Focus preset is set (page 47).
 - (Advanced Sports Shooting mode), (Landscape mode), (Twilight mode) or (Fireworks mode) is selected in the Scene Selection mode.
 - [Face Detection] is set to [On].
 - [Conversion Lens] is set to [Tele], [Wide] or [Close-up].
- When you use AF illuminator, the normal AF range finder frame is disabled and new AF range finder frame is displayed by a dotted line. AF operates with priority on subjects located near the center of the frame.
- The AF illuminator emits very bright light. Although there is no health hazard, do not look directly into the AF illuminator emitter at close range.

Grid Line

With reference to the grid lines, you can easily set a subject in a horizontal/vertical position.

	On	Displays the grid lines. 
✓	Off	Does not display the grid line.

- The grid lines are not recorded.

For details on the operation ☞ page 61

AF Mode

Selects the auto focus operation mode.

✓	Single	Automatically adjusts the focus when you press and hold the shutter button halfway down. This mode is useful for shooting stationary subjects.
	Monitor	Automatically adjusts the focus before you press and hold the shutter button halfway down. This mode shortens the time needed for focusing. • Battery consumption is faster than in [Single] mode.

- You cannot use the AF illuminator when:
 - [Face Detection] is set to [On].
 - (Advanced Sports Shooting mode) is selected in the Scene Selection mode.

Digital Zoom

Selects the digital zoom mode. The camera enlarges the image using optical zoom (up to 10×). When the zoom scale exceeds 10×, the camera uses either smart or precision digital zoom.

✓	Smart (Smart zoom) (sQ)	Enlarges the image digitally within the range where the image will not be distorted, according to the image size. This is not available when the image size is set to [8M] or [3:2]. • The total zoom scale of Smart zoom is shown in the following table.
	Precision (Precision digital zoom) (PQ)	Enlarges all image sizes by the total zoom scale of approximately 20×, including the optical zoom 10×. However, note that the picture quality deteriorates when the optical zoom scale is exceeded.
	Off	Does not use the digital zoom.

Image size and total zoom scale using Smart zoom (including the optical zoom 10×)

Size	Total zoom scale
5M	Approx. 12×
3M	Approx. 15×
VGA	Approx. 51×
16:9	Approx. 17×

- You cannot use the Digital zoom when:
 - [Face Detection] is set to [On].
 - (Advanced Sports Shooting mode) is selected in the Scene Selection mode.

For details on the operation ☞ page 61

Conversion Lens

Sets for achieving appropriate focus when attaching a conversion lens (not supplied). Attach the adaptor ring (supplied), then attach a conversion lens.

	Close-up (C)	Attaches a close-up conversion lens.
	Tele (T)	Attaches a tele conversion lens.
	Wide (W)	Attaches a wide conversion lens.
✓	Off	Does not attach a lens.

- When using the built-in flash, the flash light may be blocked, causing the shadow to appear.
- Check the image composition on the LCD screen when shooting.
- The available zoom area is limited.
- The available focusing area is limited.
- Refer also to the operating instructions supplied with your conversion lens.

For details on the operation ☞ page 61

Shooting Settings — Shooting Settings 2

The default settings are marked with ✓.

Auto Orientation

When the camera is rotated to shoot a portrait (vertical) image, the camera records its position change and displays the image in the portrait position.

✓	On	Records the image with the correct orientation.
	Off	Does not use Auto Orientation.

- Depending on the shooting angle of the camera, the orientation of the image may not be recorded correctly. If an image is not recorded in the correct orientation, you can rotate the image, following the procedure on page 60.
- Black is displayed to the left and right of vertical orientation images.

Auto Review

Displays the recorded image on the screen for approximately two seconds immediately after shooting a still image.

✓	On	Uses the Auto Review.
	Off	Does not use Auto Review.

- If you press the shutter button halfway down, the recorded image display disappears and you can immediately shoot the next image.

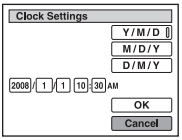
For details on the operation ☞ page 61

Clock Settings

Clock Settings

Sets the date and time.

① Select [Clock Settings] from (Settings) on the HOME screen.



② Select the date display format with ▲/▼ on the control button, then press ●.

③ Select each item with ◄/► and set the numeric value with ▲/▼, then press ●.

④ Select [OK], then press ●.

To cancel the clock setting

Select [Cancel] in step ④, then press ●.

• Midnight is indicated as 12:00 AM, and noon as 12:00 PM.

For details on the operation ☞ page 61

A Language Setting

Language Setting

Selects the language to be used in the menu items, warnings and messages.

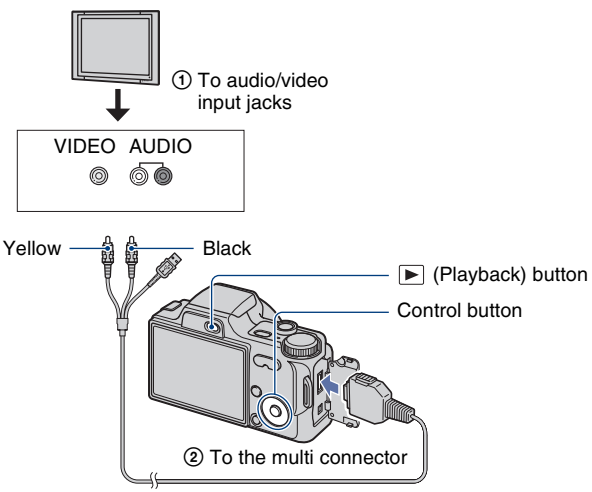
Viewing images on a TV

You can view images on a TV by connecting the camera to a TV.
The connection varies according to the type of TV the camera is connected to.

Viewing images by connecting the camera to a TV with the supplied cable for multi-use terminal

Turn off both the camera and the TV before connecting the camera to the TV.

1 Connect the camera to the TV with the cable for multi-use terminal (supplied).



- If your TV has stereo input jacks, connect the audio plug (black) of the cable for multi-use terminal to the left audio jack.

2 Turn on the TV and set the input.

- Refer also to the operating instructions supplied with the TV.

3 Press ▶ (Playback) to turn on the camera.

Images shot with the camera appear on the TV.

Press ◀/▶ on the control button to select the desired image.

- When using the camera abroad, it may be necessary to switch the video signal output to match that of your TV system (page 69).

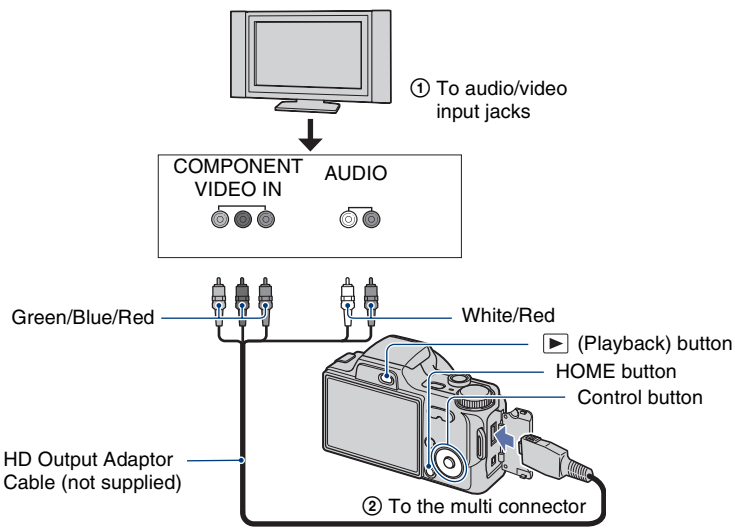
Viewing an image by connecting the camera to an HDTV

You can view an image with high quality* recorded on the camera by connecting the camera to an HD (High Definition) TV with the component cable (not supplied).

Turn off both the camera and the TV before connecting the camera to the TV.

* Images shot in [VGA] image size cannot be played back in HD format.

1 Connect the camera to an HD (High Definition) TV with a HD Output Adaptor Cable (not supplied).



2 Turn on the TV and set the input.

- Refer also to the operating instructions supplied with the TV.

3 Press ▶ (Playback) to turn on the camera.

Images shot with the camera appear on the TV.

Press ◀/▶ on the control button to select the desired image.

- Set [COMPONENT] to [HD(1080i)] in [Main Settings 2] by selecting (Settings) on the HOME screen (page 68).
- When using the camera abroad, it may be necessary to switch the video signal output to match that of your TV system (page 69).
- You cannot view movies output in [HD(1080i)] signal format. Set [COMPONENT] to [SD] when playing back movies.

On "PhotoTV HD"

This camera is compatible with the "PhotoTV HD" standard.
By connecting Sony's PhotoTV HD-compatible devices using an HD Output Adaptor Cable (not supplied), whole new world of photos can be comfortably enjoyed in breathtaking Full HD quality.
PhotoTV HD allows for a highly-detailed, photo-like expression of subtle textures and colors.

- The settings are also required to be made on the TV. For details, refer to the operating instruction of the TV.

On TV color systems

If you want to view images on a TV screen, you need a TV with a video input jack and the cable for multi-use terminal. The color system of the TV must match that of the digital still camera. Check the following lists for the TV color system of the country or region where the camera is used.

NTSC system

Bahama Islands, Bolivia, Canada, Central America, Chile, Colombia, Ecuador, Jamaica, Japan, Korea, Mexico, Peru, Surinam, Taiwan, the Philippines, the U.S.A., Venezuela, etc.

PAL system

Australia, Austria, Belgium, China, Czech Republic, Denmark, Finland, Germany, Holland, Hong Kong, Hungary, Italy, Kuwait, Malaysia, New Zealand, Norway, Poland, Portugal, Singapore, Slovak Republic, Spain, Sweden, Switzerland, Thailand, United Kingdom, etc.

PAL-M system

Brazil

PAL-N system

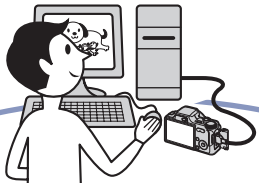
Argentina, Paraguay, Uruguay

SECAM system

Bulgaria, France, Guiana, Iran, Iraq, Monaco, Russia, Ukraine, etc.

Enjoying your Windows computer

For details on using a Macintosh computer, refer to “Using your Macintosh computer” (page 92).
Illustrations of screens used in this section are based on the English version.

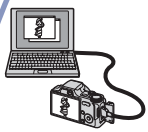


Install the software (supplied) first (page 81)



- Installing the software as follows:
 - “Picture Motion Browser”
 - “Music Transfer”

Copying images to your computer (page 84)



- Copying images to your computer using “Picture Motion Browser”.
- Enjoying images using “Picture Motion Browser” and “Music Transfer” as follows:
 - Viewing images saved on your computer
 - Editing images
 - Displaying the shooting locations of still images on maps online
 - Creating a disc with the images shot (requires CD or DVD disc writing drive)
 - Printing or saving still images with the date
 - Adding/changing Music for slide show (using “Music Transfer”)

Additional information on this product and answers to frequently asked questions can be found at the Sony Customer Support Website.
http://www.sony.net/

Recommended computer environment

The following environment is recommended for a computer connected to the camera.

Recommended environment for copying images

OS (pre-installed): Microsoft Windows 2000 Professional SP4, Windows XP* SP2/Windows Vista*

- Operation is not assured in an environment based on an upgrade of the operating systems described above or in a multi-boot environment.

USB jack: Provided as standard

Recommended environment for using "Picture Motion Browser" and "Music Transfer"

OS (pre-installed): Microsoft Windows 2000 Professional SP4, Windows XP* SP2/Windows Vista*

CPU: Intel Pentium III 500 MHz or faster (Recommended: Intel Pentium III 800 MHz or faster)

Memory: 256 MB or more (Recommended: 512 MB or more)

Hard Disk: Disk space required for installation— approximately 400 MB

Display: Screen resolution: 1,024 × 768 dots or more

* 64-bit editions and Starter (Edition) is not supported.

Notes on connecting the camera to a computer

- The computer environment must also satisfy the operating requirements of the OS.
- Operations are not guaranteed for all the recommended computer environments mentioned above.
- If you connect two or more USB devices to a single computer at the same time, some devices, including the camera, may not operate, depending on the types of USB devices you are using.
- Operations are not guaranteed when using a USB hub.
- Connecting the camera using a USB interface that is compatible with Hi-Speed USB (USB 2.0 compliant) allows advanced transfer (high speed transfer) as the camera is compatible with Hi-Speed USB (USB 2.0 compliant).
- There are three modes for a USB connection when connecting a computer, [Auto] (default setting), [Mass Storage] and [PictBridge] modes. This section describes the [Auto] and [Mass Storage] as examples. For details on [PictBridge], see page 68.
- When your computer resumes from a suspend or sleep mode, communication between the camera and your computer may not recover at the same time.

Installing the software (supplied)

You can install the software (supplied) using the following procedure.

• Log on as Administrator.

1 Turn on your computer, and insert the CD-ROM (supplied) into the CD-ROM drive.

The installation menu screen appears.



- If it does not appear, double-click [Computer] (in Windows XP/2000, [My Computer]) → (SONYPICTUTIL).
- Under Windows Vista, the AutoPlay screen may appear. Select “Run Install.exe.” and follow the instructions that appear on the screen to proceed with the installation.

2 Click [Install].

The “Choose Setup Language” screen appears.

3 Select the desired language, then click [Next].

The “License Agreement” screen appears.

4 Read the agreement carefully. If you accept the terms of the agreement, click the radio button next to [I accept the terms of the license agreement] and then click [Next].

5 Follow the instructions on the screen to complete the installation.

- When the restarting confirmation message appears, restart the computer following the instructions on the screen.
- DirectX may be installed depending on the system environment of your computer.

6 Remove the CD-ROM after the installation is complete.

- Installing software as follows:
 - Picture Motion Browser
 - Music Transfer

After you install the software, the short cut icons for “Picture Motion Browser”, “PMB Guide”, “Music Transfer” are created on the desktop.	
	Double-click to start “Picture Motion Browser”.
	Double-click to start “PMB Guide”.
	Double-click to start “Music Transfer”.

On the “Picture Motion Browser” (supplied)

You can use still images and movies from the camera more than ever by taking advantage of the software.
This section summarizes the “Picture Motion Browser”.

“Picture Motion Browser” overview

With the “Picture Motion Browser” you can:

- Import images shot with the camera and display them on the computer.
- Organize images on the computer on a calendar by shooting date to view them.
- Copy images on the computer to the recording media.
- Retouch (Red Eye Correction, etc.), print, and send still images as e-mail attachments, change the shooting date and more.
- Still images can be printed or saved with the date.
- You can create a data disc using a CD burner drive or DVD burner drive.
- For details, refer to “PMB Guide”.

Starting the “PMB Guide”

Double-click the (PMB Guide) icon on the desktop.
To access “PMB Guide” from the Start menu, click [Start] → [All Programs] (in Windows 2000, [Programs]) → [Sony Picture Utility] → [Help] → [PMB Guide].

Starting and exiting the “Picture Motion Browser”

Starting the “Picture Motion Browser”

Double-click the (Picture Motion Browser) icon on the desktop.
Or, from the Start menu: Click [Start] → [All Programs] (in Windows 2000, [Programs]) → [Sony Picture Utility] → [PMB - Picture Motion Browser].

- The confirmation message of the Information tool appears on the screen when starting the “Picture Motion Browser” for the first time. Select [Start]. This function informs you of news, such as software updates. You can change the setting later.

Exiting the “Picture Motion Browser”

Click button in the top right corner of the screen.

“Picture Motion Browser” is preset with URL of several websites. Give your consent to the following on using the image upload service, etc. (hereon after referred to as service) provided by the websites (including those preset) by using “Picture Motion Browser”.

- Depending on websites, registration procedures or fees may be required on using the service.
- Follow the terms and conditions of the agreement set by the website on using the service.
- Termination or changes in service may occur depending on certain reasons of the website operator, etc. Including these situations, Sony is not held responsible for any troubles between customers and a third party or any loss to customers on using the service.
- To view the website, you will be redirected by a server run by Sony (hereon after referred to as Sony server). You may not be able to access the website because of server maintenance, etc.
- On termination of the operation of Sony server, the termination will be informed of beforehand on Sony websites, etc.
- The URL redirected to by Sony server, etc., may be recorded for improving future Sony products and services. In this case, personal data will not be recorded.

Copying images to your computer using the “Picture Motion Browser”

Preparing the camera and the computer

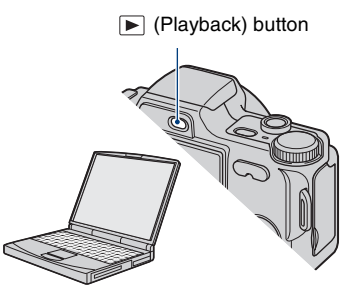
1 Insert a “Memory Stick Duo” with recorded images into the camera.

- When copying images in the internal memory, this step is unnecessary.

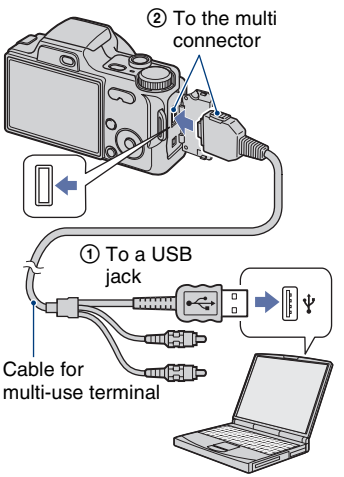
2 Insert the sufficiently charged battery pack in the camera, or connect the camera to a wall outlet (wall socket) with the AC Adaptor (not supplied).

- When you copy images to your computer using a battery pack with little remaining charge, copying may fail or image data may become corrupted if the battery pack shuts down too soon.

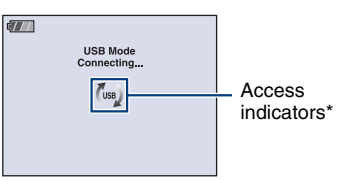
3 Turn on the computer, then press ▶ (Playback) button.



Connecting the camera to your computer



“Connecting...” appears on the screen of the camera.



When a USB connection is established for the first time, your computer automatically runs a program to recognize the camera. Wait for a while.

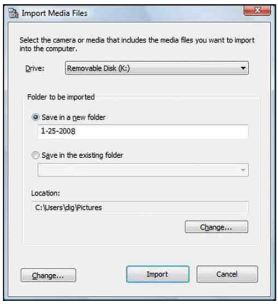
* USB is displayed on the screen during the communication session.
Do not operate the computer while the indicator is displayed. When the indicator changes to USB, you can start using the computer again.

- If “Mass Storage” does not appear, set [USB Connect] to [Mass Storage] (page 68).

Copying images to a computer

1 Connects the camera to a computer as described in “Connecting the camera to your computer”.

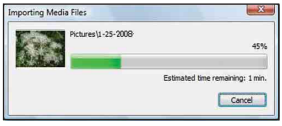
After making a USB connection, the [Import Media Files] screen of “Picture Motion Browser” appears automatically.



- If you use the Memory Stick slot, refer to page 88.
- If the AutoPlay Wizard appears, close it.

2 Import the images.

To start importing images, click the [Import] button.



By default, images are imported into a folder created in “Pictures” (in Windows XP/2000, “My Pictures”) that is named with the date of importing.

- For details on the “Picture Motion Browser”, refer to “PMB Guide”.

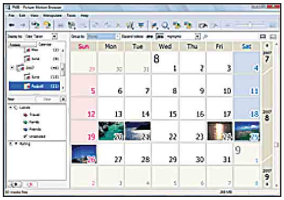
Viewing images on your computer

When importing is complete, the “Picture Motion Browser” starts. Thumbnails of the imported images are displayed.



- The “My Pictures” folder is set as the default folder in “Viewed folders”.

Organize images on the computer on a calender by shooting date to view them. For details, see the “PMB Guide”.



Example: Month display screen

To delete the USB connection

Perform the procedures from step ① to ④ below before:

- Disconnecting the cable for multi-use terminal.
- Removing a “Memory Stick Duo”.
- Inserting a “Memory Stick Duo” into the camera after copying images from the internal memory.
- Turning off the camera.

① Double-click the disconnect icon on the tasktray.

Windows Vista



Double-click here

Windows XP/Windows 2000



Double-click here

② Click (USB Mass Storage Device) → [Stop].

③ Confirm the device on the confirmation window, then click [OK].

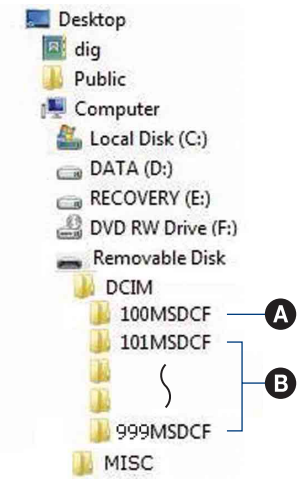
④ Click [OK].
The device is disconnected.

- Step ④ is unnecessary for Windows XP/Vista.

Image file storage destinations and file names

The image files recorded with the camera are grouped as folders on the “Memory Stick Duo” or the internal memory.

Example: viewing folders on Windows Vista



Ⓐ Folder containing image data recorded using a camera not equipped with the folder creating function

Ⓑ Folder containing image data recorded using the camera
When no new folders are created, there are folders as follows:

- “Memory Stick Duo”: “101MSDCF” only
- Internal memory: “101_SONY” only

- You cannot record any images to the “100MSDCF” folder. The images in this folder are available only for viewing.
- You cannot record/play back any images to the “MISC” folder.
- Image files are named as follows:
 - Still image files: DSC0□□□□.JPG
 - Movie files: MOV0□□□□.MPG

– Index image files that are recorded when you record movies: MOV0□□□□.THM

- □□□□ stands for any number within the range from 0001 to 9999. The numerical portions of the name of a movie file recorded in movie mode and its corresponding index image file are the same.
- For more information about folders, see pages 60 and 63.

Copying images to a computer without “Picture Motion Browser”

You can copy images to your computer without “Picture Motion Browser” as follows.

For a computer with a Memory Stick slot

Remove the “Memory Stick Duo” from the camera and insert it in the Memory Stick Duo Adaptor. Insert the Memory Stick Duo Adaptor in the computer and copy the images.

- Even when you are using Windows 95/98/98 SecondEdition/NT/Me, you can copy images by inserting the “Memory Stick Duo” into the Memory Stick slot on your computer.
- If the “Memory Stick PRO Duo” is not recognized, see page 106.

For a computer without a Memory Stick slot

Make a USB connection and follow Stages to copy images.

- The screen displays shown in this section are the examples for copying images from “Memory Stick Duo”.
- The camera is not compatible with Windows 95/98/98 SecondEdition/NT/Me of the Windows operating system.
 When you use a computer without a Memory Stick slot, use a commercially available Memory Stick Reader/Writer to copy images from a “Memory Stick Duo” to your computer.
- To copy images in the internal memory to your computer, copy the images to a “Memory Stick Duo” first, then copy them to your computer.

Copying images to a computer -Windows Vista/XP

This section describes an example of copying images to the “Documents” (For Windows XP: “My Documents”).

1 Prepare the camera and a computer.

Perform the same procedure as described in “Preparing the camera and the computer” on page 84.

2 Connect the camera to your computer with the cable for multi-use terminal.

Perform the same procedure as described in “Connecting the camera to your computer” on page 84.

- If “Picture Motion Browser” is already installed, then [Import Media Files] is started on “Picture Motion Browser” but select [Cancel] to finish.

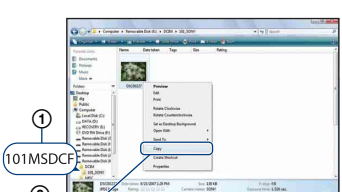
3 Click [Open folder to view files] (For Windows XP: [Open folder to view files] → [OK]) as the wizard screen appears automatically on the desktop.



- When the wizard screen does not appear automatically, follow the procedure: → “For Windows 2000” on page 89.

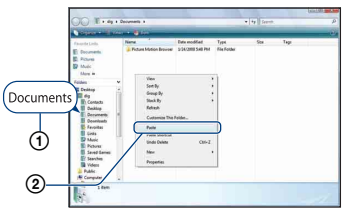
4 Double-click [DCIM].

5 Double-click the folder where the image files you want to copy are stored. Then, right-click an image file to display the menu and click [Copy].



- On the storage destination of the image files, see page 86.

6 Click the [Documents] (For Windows XP: [My Documents]) folder. Then, right-click on the “Documents” window to display the menu and click [Paste].



The image files are copied to the [Documents] (For Windows XP: [My Documents]) folder.

- When an image with the same file name exists in the copy destination folder, the overwrite confirmation message appears. When you overwrite an existing image with a new one, the original file data is deleted. To copy an image file to the computer without overwriting, change the file name and then copy the image file. However, note that if you change the file name (page 90), you may not play back that image with the camera.

For Windows 2000

Double-click [My Computer] → [Removable Disk] after Connecting the camera to your computer. Then, perform from step 4.

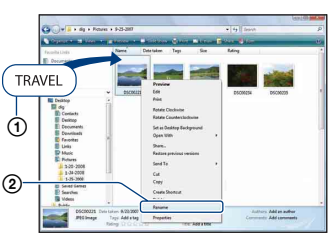
Viewing image files stored on a computer with the camera copying to the “Memory Stick Duo”

This section describes the process using a Windows computer as an example.
When an image file copied to a computer no longer remains on a “Memory Stick Duo”, you can view that image again on the camera by copying the image file on the computer to a “Memory Stick Duo”.

- Skip step 1 if the file name set with the camera has not been changed.
- You may not able to play back some images depending on the image size.
- Sony does not guarantee playback of image files on the camera if the files have been processed using a computer or recorded with another camera.
- When there are no folders in a “Memory Stick Duo”, create a folder (page 63) with the camera first, then copy the image files.

1 Right-click the image file, then click [Rename]. Change the file name to “DSC0□□□□”.

Enter a number from 0001 to 9999 for □□□□.



- If the overwrite confirmation message appears, enter a different number.
- An extension may be displayed depending on the computer settings. The extension for still images is JPG, and the extension for movies is MPG. Do not change the extension.

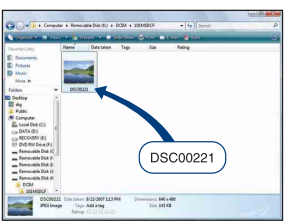
2 Copy the image file to the “Memory Stick Duo” folder in the following order.

①Right-click the image file, then click [Copy].

②Double-click [Removable Disk] or [SonyMemoryStick] in [Computer] (in Windows XP, [My Computer]).

③Right-click the [□□□MSDCF] folder in the [DCIM] folder, then click [Paste].

- □□□ stands for any number within the range from 100 to 999.



Using the “Music Transfer” (supplied)

You can change the Music files that are preset at the factory to the desired Music files using “Music Transfer” in the CD-ROM (supplied). You can also delete or add these files whenever you want.

Adding/Changing Music using “Music Transfer”

The music formats you can transfer with “Music Transfer” are listed below:

- MP3 files stored on the hard disk drive of your computer
- Music on CDs
- Preset-music saved on the camera

1 Press HOME to display the HOME screen.

2 Select (Printing, Other) with ◄/► on the control button, select [Music Tool] with ▲/▼, then press ●.

3 Select [Download Music] with ▲/▼/◄/►, then press ●.

The message “Connect to PC” appears.

4 Make a USB connection between the camera and your computer.

5 Start “Music Transfer”.

6 Follow the instructions on the screen to add/change Music files.

- To restore the music preset at the factory to the camera:

① Perform [Format Music] in step 3.

② Execute [Restore defaults] on “Music Transfer”.

All Music files return to the preset-music, and [Music] in the [Slide Show] menu is set to [Off].

- You can reset the Music files to the preset ones using [Initialize] (page 67), however, other settings will also be reset.
- For details on using “Music Transfer”, see the on-line help in “Music Transfer”.

Using your Macintosh computer

You can copy images to your Macintosh computer.

- "Picture Motion Browser" is not compatible with Macintosh computers.

Recommended computer environment

The following environment is recommended for a computer connected to the camera.

Recommended environment for copying images

OS (pre-installed): Mac OS 9.1/9.2/ Mac OS X(v10.1 to v10.5)

USB jack: Provided as standard

Recommended environment for using "Music Transfer"

OS (pre-installed): Mac OS X (v10.3 to v10.5)

CPU: iMac, eMac, iBook, PowerBook, Power Mac G3/G4/G5 series, Mac mini

Memory: 64 MB or more (128 MB or more is recommended)

Hard Disk: Disk space required for installation—approximately 250 MB

Notes on connecting the camera to a computer

- Operations are not guaranteed for all the recommended computer environments mentioned above.
- If you connect two or more USB devices to a single computer at the same time, some devices, including the camera, may not operate depending on the types of USB devices you are using.
- Operations are not guaranteed when using a USB hub.
- Connecting the camera using a USB interface that is compatible with Hi-Speed USB (USB 2.0 compliant) allows advanced transfer (high speed transfer) as the camera is compatible with Hi-Speed USB (USB 2.0 compliant).
- There are three modes for a USB connection when connecting a computer, [Auto] (default setting), [Mass Storage] and [PictBridge] modes. This section describes the [Auto] and [Mass Storage] as examples. For details on [PictBridge], see page 68.
- When your computer resumes from the suspend or sleep mode, communication between the camera and your computer may not recover at the same time.

Copying and viewing images on a computer

1 Prepare the camera and a Macintosh computer.

Perform the same procedure as described in "Preparing the camera and the computer" on page 84.

2 Connect the camera to your computer with the cable for multi-use terminal.

Perform the same procedure as described in "Connecting the camera to your computer" on page 84.

3 Copy image files to the Macintosh computer.

①Double-click the newly recognized icon → [DCIM] → the folder where the images you want to copy are stored.

②Drag and drop the image files to the hard disk icon.
The image files are copied to the hard disk.

- For details on the storage location of the images and file names, see page 86.

4 View images on the computer.

Double-click the hard disk icon → the desired image file in the folder containing the copied files to open that image file.

To delete the USB connection

Drag and drop the drive icon or the icon of the "Memory Stick Duo" to the "Trash" icon beforehand when you perform the procedures listed below, or the camera is disconnected from the computer.

- Disconnecting the cable for multi-use terminal.
- Removing a "Memory Stick Duo".
- Inserting a "Memory Stick Duo" into the camera after copying images from the internal memory.
- Turning off the camera.

Adding/Changing Music using "Music Transfer"

You can change the Music files that are preset at the factory to the desired Music files. You can also delete or add these files whenever you want.
The music formats you can transfer with "Music Transfer" are listed below:

- MP3 files stored on the hard disk drive of your computer
- Music on CDs
- Preset-music saved on the camera

To install "Music Transfer"

- Shut down all other application software before you install "Music Transfer".
- For installation, you need to log on as Administrator.

① Turn on your Macintosh computer, and insert the CD-ROM (supplied) into the CD-ROM drive.

② Double-click (SONYPICTUTIL).

③ Double-click the [MusicTransfer.pkg] file in [MAC] folder.
The installation of the software starts.

To add/change Music files

See "Adding/Changing Music using "Music Transfer"" on page 91.

Technical Support

Additional information on this product and answers to frequently asked questions can be found at the Sony Customer Support Website.
http://www.sony.net/

Viewing “Cyber-shot Step-up Guide”

When you install “Cyber-shot Handbook”, “Cyber-shot Step-up Guide” is also installed. “Cyber-shot Step up Guide” further introduces how to use the camera and optional accessories.

Viewing on Windows

Double-click (Step-up Guide) on the desktop.

To access “Step-up Guide” from the Start menu, click [Start] → [All Programs] (in Windows 2000, [Programs]) → [Sony Picture Utility] → [Step-up Guide].

Viewing on Macintosh

1 Copy the [stepupguide] folder in the [stepupguide] folder to your computer.

2 Select [stepupguide], [language] and then [GB] folder stored in the CD-ROM (supplied) and copy all the files in the [GB] folder, then write over them to the files in the [img] folder stored in [stepupguide] which is copied to your computer in the step 1.

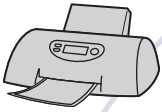
3 After copying is complete, double-click “stepupguide.hqx” in the [stepupguide] folder to uncompress it, then double-click the generated file “stepupguide”.

- If an uncompress tool for HQX file is not installed, install the Stuffit Expander.

How to print still images

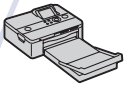
When you print images shot in [16:9] mode, both edges may be cut off, so be sure to check before printing (page 108).

Printing directly using a PictBridge compliant printer (page 96)



You can print images by connecting the camera directly to a PictBridge compliant printer.

Printing directly using a “Memory Stick” compliant printer



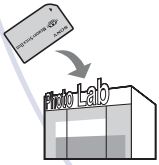
You can print images with a “Memory Stick” compliant printer. For details, see the operating instructions supplied with the printer.

Printing using a computer



You can copy images to a computer using the supplied “Picture Motion Browser” software and print the images.
You can insert the date on the image and print it (page 83).

Printing at a shop (page 99)



You can take a “Memory Stick Duo” containing images shot with the camera to a photo printing service shop. You can make a DPOF (Print order) mark on the images which you want to print out in advance.

Printing images directly using a PictBridge compliant printer

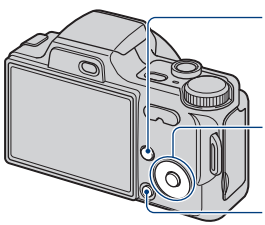
Even if you do not have a computer, you can print images shot using the camera by connecting the camera directly to a PictBridge compliant printer.

PictBridge

- "PictBridge" is based on the CIPA standard. (CIPA: Camera & Imaging Products Association)
- You cannot print movies.
- If the indicator flashes on the screen of the camera (error notification), check the connected printer.

Stage 1: Preparing the camera

Prepare the camera for connection to the printer, using the cable for multi-use terminal. When [USB Connect] is set to [Auto], the camera will automatically recognize certain printers when connected. Skip 1, if this is the case.



- It is recommended to use a fully charged battery pack to prevent the power from turning off partway through printing.

1 **Press HOME to display the HOME screen.**

2 **Select (Settings) with ◄/► on the control button, and select [Main settings] with ▲/▼, then press ●.**

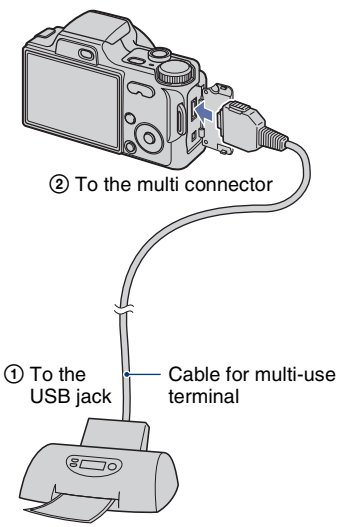
3 **Select [Main Settings 2] with ▲/▼/◄/►, and select [USB Connect], then press ●.**

4 **Select [PictBridge] with ▲/▼, then press ●.**

The USB mode is set.

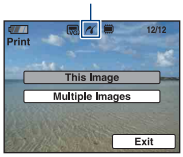
Stage 2: Connecting the camera to the printer

1 Connect the camera to the printer.



2 Turn on the printer, press the ▶ (Playback) button, then turn on the camera.

After the connection is made, the ✓ indicator appears.



The camera is set to playback mode, then an image and the print menu appear on the screen.

Stage 3: Selecting images you want to print

Select [This Image] or [Multiple Images] with ▲/▼, then press ●.

When you select [This Image]

You can print the selected image. Move on to Stage 4.

When you select [Multiple Images]

You can print multiple selected images.

①Select the image you want to print with ◀/▶, then press ●.
✓ appears on the selected image.

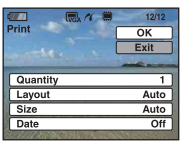
②Press MENU to display the menu.

③Select [OK] with ▲, then press ●.

- After you select [Multiple Images] on the index screen, you can print all the images in a folder by selecting the folder selection bar with ◀ and attaching a ✓ mark on the folder.

Stage 4: Printing

1 Select print settings with ▲/▼/◄/►.



[Quantity]

Select the number of copies you want to print.

- The designated number of images may not all fit onto a single sheet depending on the quantity of images.

[Layout]

Selects the number of image you want to print side by side on a sheet.

[Size]

Select the size of the printing sheet.

[Date]

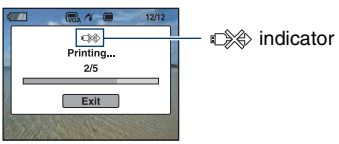
Select [Day & Time] or [Date] to insert the date and time on images.

- When you choose [Date], the date will be inserted in the order you select (page 74). This function may not be provided depending on the printer.

2 Select [OK] with ▲, then press ●.

The image is printed.

- Do not disconnect the cable for multi-use terminal while the (PictBridge Connecting) indicator appears on the screen.



Stage 5: Completing the printing

Make sure the screen has returned to Stage 2, and disconnect the cable for multi-use terminal from the camera.

Printing at a shop

You can take a “Memory Stick Duo” containing images shot with the camera to a photo printing service shop. As long as the shop supports photo printing services conforming to the DPOF, you can make a DPOF (Print order) mark on images in advance so that you do not need to reselect them when you print them out at the shop.

- You cannot print images stored in the internal memory at a print shop directly from the camera. Copy the images to a “Memory Stick Duo”, then take the “Memory Stick Duo” to the print shop.

What is DPOF?

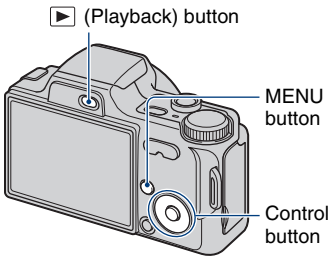
DPOF (Digital Print Order Format) is a function allowing you to make a DPOF (Print order) mark on images of “Memory Stick Duo” that you want to print out later.

- You can also print the images with the DPOF (Print order) mark using a printer that conforms to the DPOF (Digital Print Order Format) standard or using a PictBridge compliant printer.
- You cannot mark movies.

When taking a “Memory Stick Duo” to a shop

- Consult your photo printing service shop as to what types of “Memory Stick Duo” they handle.
- If a “Memory Stick Duo” is not handled by your photo printing service shop, copy the images you want to print out to another medium such as a CD-R and take it to the shop.
- Be sure to take the Memory Stick Duo Adaptor with it.
- Before you take image data to a shop, always copy (back up) your data to a disk.
- You cannot set the number of prints.
- When you want to superimpose dates on images, consult your photo printing service shop.

Marking a selected image



1 Press (Playback).

2 Select the image you want to print.

3 Press MENU to display the menu.

4 Select [DPOF] with ▲/▼ on the control button and select [This Image] with ◀/▶, then press ●.

The DPOF (Print order) mark is attached to the image.



To remove the mark

Select the images from which you want to remove the mark, then repeat steps 3 and 4.

Selecting and marking the images

1 **Press MENU while displaying images in single-image mode or in index mode.**

2 **Select [DPOF] with ▲/▼ on the control button, [Multiple Images] with ◄/►, and then press ●.**

3 **Select an image to mark with the control button, then press ●.**

The ✓ mark is attached to the selected image.

Single Image



Index Display

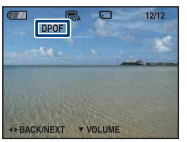


4 **Press MENU.**

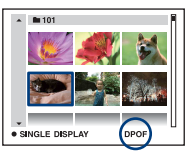
5 **Select [OK] with ▲, then press ●.**

The DPOF mark appears on the screen.

Single Image



Index Display



To cancel the selection

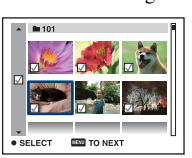
Select [Exit] in step 5, then press ●.

To remove the mark

Select the images that you want to remove the marks, then press ● in step 3.

To mark all the images in the folder

In step3, move the frame to the folder selection bar with ◄, then press ● during the index mode.
The ✓ mark is attached to the selected folder and all the images.



Troubleshooting

If you experience trouble with the camera, try the following solutions.

❶ **Check the items on pages 102 to 110.**
If a code such as "C/E:□□:□□" appears on the screen, see page 111.

❷ **Remove the battery pack, wait for about one minute, re-insert the battery pack, then turn on the power.**

❸ **Initialize the settings (page 67).**

❹ **Consult your Sony dealer or local authorized Sony service facility.**

Be aware that by sending the camera for repair, you give consent that the contents of the internal memory, Music files may be checked.

Click one of the following items to jump to the page explaining the symptom and cause or the appropriate corrective action.

Battery pack and power	102	"Memory Stick Duo"	107
Shooting still images/movies	102	Internal memory	108
Viewing images	105	Printing	108
Deleting	106	PictBridge compliant printer	109
Computers	106	Others	110

Battery pack and power

Cannot insert the battery pack.

- Insert the battery pack correctly to push the battery eject lever.

Cannot turn on the camera.

- After inserting the battery pack into the camera, it may take a few moments for the camera to power up.
- Insert the battery pack correctly.
- The battery pack is discharged. Insert charged battery pack.
- The battery pack is dead (page 117). Replace it with a new one.
- Use a recommended battery pack.

The power turns off suddenly.

- If you do not operate the camera for about three minutes while the power is on, the camera turns off automatically to prevent wearing down the battery pack. Turn on the camera again.
- The battery pack is dead (page 117). Replace it with a new one.

The remaining charge indicator is incorrect.

- This phenomenon occurs when you use the camera in an extremely hot or cold location.
- A discrepancy arose between the remaining charge indicator and the actual remaining battery charge. Fully discharge the battery pack once, then charge it to correct the indication.
- The battery pack is discharged. Insert a charged battery pack.
- The battery pack is dead (page 117). Replace it with a new one.

Cannot charge the battery pack.

- You cannot charge the battery pack using the AC Adapter (not supplied).

Shooting still images/movies

Cannot record images.

- Check the free capacity of the internal memory or “Memory Stick Duo”. If it is full, do one of the following:
 – Delete unnecessary images (page 35).
 – Change the “Memory Stick Duo”.
- You cannot record images while charging the flash.
- When shooting a still image, set the mode dial to a position other than 🎞.
- Set the mode dial to 🎞 when shooting movies.
- The image size is set to [640(Fine)] when recording movies. Do one of the following:
 – Set the image size to other than [640(Fine)].
 – Insert a “Memory Stick PRO Duo”.

This subject is not visible on the screen.

- The camera is set to the playback mode. Press ▶ to change to the recording mode (page 33).

Anti-blur function does not work.

- The anti-blur function does not work when OFF appears on the display.
- The anti-blur function may not work properly when shooting night scenes.
- Shoot after pressing the shutter button halfway down; do not press it fully down suddenly.

Recording takes a long time.

- The NR slow shutter function is activated (page 18). This is not a malfunction.

The image is out of focus.

- The subject is too close. Shoot in (Macro) recording mode. Make sure to position the lens farther away from the subject than the shortest shooting distance, approximately 2 cm (13/16 inches) (W)/90 cm (2 feet 11 1/2 inches) (T), when shooting (page 26).
- (Twilight mode), (Landscape mode) or (Fireworks mode) is selected in the Scene Selection mode when shooting still images.
- If (Advanced Sports Shooting mode) is selected in the Scene Selection mode and the subject is too close, focusing may be difficult.
- The Focus preset function is selected. Select the auto focus mode (page 47).
- Confirm that the [Conversion Lens] setting is correct (page 72).
- Refer to “If the subject is out of focus” on page 48.

Zoom does not work.

- You cannot use the Smart zoom when the image size is set to [8M] or [3:2].
- You cannot use the Digital Zoom when:
 - [Face Detection] is set to [On].
 - (Advanced Sports Shooting mode) is selected in the Scene Selection mode.
 - You shoot movies.
- You cannot change the zoom scale while shooting a movie.
- Confirm that the [Conversion Lens] setting is correct (page 72).

The flash does not work.

- The flash is set to (Flash forced off) (page 26).
- You cannot use the flash when:
 - [REC Mode] is set to [Burst] or Exposure Bracket (page 43).
 - ISO (High Sensitivity mode), (Advanced Sports Shooting mode), (Twilight mode) or (Fireworks mode) is selected in the Scene Selection mode (page 30).
 - Shooting movies.
- Set the flash to (Flash forced on) when the mode dial is set to M or when (Landscape mode), (Beach mode), or (Snow mode) is selected in the Scene Selection mode (page 26).

Fuzzy white circular spots appear in images shot using the flash.

- Particles (dust, pollen, etc.) in the air reflected the flash light and appeared in the image. This is not a malfunction (page 13).

The close-up shoot function (Macro) does not work.

- (Advanced Sports Shooting mode), (Landscape mode), (Twilight mode) or (Fireworks mode) is selected in the Scene Selection mode (page 30).

The date and time are not displayed on the LCD screen.

- While shooting, the date and time are not displayed. They are displayed only during playback.

Cannot insert dates on image.

- The camera does not have a feature for superimposing dates on images (page 108). By using "Picture Motion Browser", you can print or save images with the date (page 83).

The F value and shutter speed flash when you press and hold the shutter button halfway down.

- The exposure is incorrect. Correct the exposure (page 45).

The screen is too dark or too bright.

- Adjust the brightness of the LCD backlight (page 21).

The image is too dark.

- You are shooting a subject with a light source behind the subject. Select the metering mode (page 46) or adjust the exposure (page 45).

The image is too bright.

- Adjust the exposure (page 45).

The image colors are not correct.

- Set [Color Mode] to [Normal] (page 44).

Vertical streaks appear when you are shooting a very bright subject.

- The smear phenomenon is occurring and white, black, red, purple, or other streaks appear on the image. This phenomenon is not a malfunction.

Noise appears in the image when you view the screen in a dark place.

- The camera is attempting to increase the visibility of the screen by temporarily brightening the image under conditions of low illumination. There is no effect on the recorded image.

The eyes of the subject come out red.

- Set [Red Eye Reduction] to [On] (page 50).
- Shoot the subject at a distance closer than the flash range using the flash.
- Light the room and shoot the subject.
- Retouch the image using [Red Eye Correction] (page 58).

Dots appear and remain on the screen.

- This is not a malfunction. These dots are not recorded (page 2).

Cannot shoot images in succession.

- The internal memory or “Memory Stick Duo” is full. Delete unnecessary images (page 35).
- The battery level is low. Insert the charged battery pack.

The image taken in high-zoom is distorted.

- The image may become distorted when the weather is unstable, due to haze. This is not a malfunction. You cannot know whether haze will occur or not while shooting. It is recommended to check the taken image by using playback zoom after shooting.

Viewing images

Cannot play back images.

- Press ▶ (Playback) (page 33).
- The folder/file name has been changed on your computer (page 90).
- Sony does not guarantee playback of image files on the camera if the files have been processed using a computer or recorded with another camera.
- The camera is in USB mode. Delete the USB connection (page 86).

The date and time are not displayed.

- The display indicators are turned off. Show the display indicators by pressing ▲ (DISP) on the control button (page 21).

The image appears rough right after playback starts.

- This may happen due to image processing. This is not a malfunction.

Cannot hear music during Slide show.

- Transfer music files to the camera with “Music Transfer” (page 91).

The image does not appear on the TV screen.

- Check [Video Out] to see if the video output signal of the camera is set to the color system of your TV (page 69).
- Check whether the connection is correct (page 76).
- If the USB connector of the cable for multi-use terminal is connected to another device, disconnect it (page 86).
- You are trying to play back movies during HD(1080i) output. Movies cannot be viewed at high-definition image quality. Set [COMPONENT] to [SD] (page 68).

Deleting

Cannot delete an image.

- Cancel the protection (page 59).

Computers

Computer OS compatibility with camera is unknown.

- Check “Recommended computer environment” on page 80 for Windows, and page 92 for Macintosh.

“Memory Stick PRO Duo” is not recognized by a computer with a “Memory Stick” slot.

- Check that the computer and the Memory Stick Reader/Writer support “Memory Stick PRO Duo”. Users of computers and Memory Stick Readers/Writers made by manufacturers other than Sony should contact those manufacturers.
- If “Memory Stick PRO Duo” is not supported, connect the camera to the computer (pages 84 and 92). The computer recognizes the “Memory Stick PRO Duo”.

Your computer does not recognize the camera.

- Turn on the camera.
- When the battery level is low, insert the charged battery pack or use the AC adaptor (not supplied) (page 84).
- Set [USB Connect] to [Mass Storage] (page 68).
- Use the cable for multi-use terminal (supplied) (page 84).
- Disconnect the cable for multi-use terminal from both the computer and the camera, and connect it again firmly.
- Disconnect all equipment other than the camera, the keyboard and the mouse from the USB connectors of your computer.
- Connect the camera directly to your computer without passing through a USB hub or other device (page 84).

Cannot copy images.

- Connect the camera and your computer correctly making a USB connection (page 84).
- Follow the designated copy procedure for your OS (pages 88 and 92).
- When you shoot images with a “Memory Stick Duo” formatted by a computer, you may not be able to copy the images to a computer. Shoot using a “Memory Stick Duo” formatted by the camera (page 63).

After making a USB connection, “Picture Motion Browser” does not start automatically.

- Make the USB connection after the computer is turned on (page 84).

Cannot play back images on your computer.

- If you are using “Picture Motion Browser”, refer to “PMB Guide” (page 83).
- Consult the computer or software manufacturer.

You do not know how to use “Picture Motion Browser”.

- Refer to “PMB Guide” (page 83).

The image and sound are interrupted by noise when you view a movie on a computer.

- You are playing back the movie directly from the internal memory or the “Memory Stick Duo”. Copy the movie to the hard disk of your computer, then play back the movie from the hard disk (page 88).

Cannot print an image.

- Refer to the operation manual of the printer.

Images once copied to a computer cannot be viewed on the camera.

- Copy them to a folder recognized by the camera, such as “101MSDCF” (page 86).
- Follow the correct procedures (page 90).

“Memory Stick Duo”

Cannot insert a “Memory Stick Duo”.

- Insert it in the correct direction.

You have formatted a “Memory Stick Duo” by mistake.

- All the data on the “Memory Stick Duo” is deleted by formatting. You cannot restore it.

Internal memory

Cannot playback or record images using the internal memory.

- There is a “Memory Stick Duo” inserted in the camera. Remove it.

Cannot copy the data stored in the internal memory to a “Memory Stick Duo”.

- The “Memory Stick Duo” is full. Copy the image to the “Memory Stick Duo” with sufficient free capacity.

Cannot copy the data on the “Memory Stick Duo” or the computer to the internal memory.

- This feature is not available.

Printing

See “PictBridge compliant printer” together with the following items.

Images are printed with both edges cut off.

- Depending on your printer, all the edges of the image may be cut off. Especially when you print an image shot with the image size set to [16:9], the lateral end of the image may be cut off.
- When printing images using your printer, cancel the trimming or borderless settings. Consult the printer manufacturer as to whether the printer provides these functions or not.
- When having images printed at a digital print shop, ask the shop whether they can print the images without cutting off both edges.

Cannot print images with the date.

- Using “Picture Motion Browser”, you can print images with date (page 83).
- The camera does not have a feature for superimposing dates on images. However, because the images shot with the camera include information on the recording date, you can print images with the date superimposed if the printer or the software can recognize Exif information. For compatibility with Exif information, consult the manufacturer of the printer or the software.
- If you use a photo printing service, ask them to superimpose the dates on images.

PictBridge compliant printer

A connection cannot be established.

- The camera cannot be connected directly to a printer that is not compliant with the PictBridge standard. Consult the printer manufacturer as to whether the printer is compliant with PictBridge or not.
- Check that the printer is turned on and can be connected to the camera.
- Set [USB Connect] to [PictBridge] (page 68).
- Disconnect and connect the cable for multi-use terminal again. If an error message is indicated on the printer, refer to the operating instructions supplied with the printer.

Cannot print images.

- Check that the camera and the printer are properly connected using the cable for multi-use terminal.
- Turn on the printer. For further information, refer to the operating instructions supplied with the printer.
- If you select [Exit] during printing, images may not be printed. Disconnect and connect the cable for multi-use terminal again. If you still cannot print your images, disconnect the cable for multi-use terminal, turn the printer off and then on, then connect the cable for multi-use terminal again.
- Movies cannot be printed.
- Images shot using cameras other than the camera or images modified with a computer may not be printed.

Printing is canceled.

- Confirm that you have disconnected the cable for multi-use terminal before the (PictBridge Connecting) mark disappears.

Cannot insert the date or print images in the index mode.

- The printer does not provide these functions. Consult the printer manufacturer as to whether the printer provides these functions or not.
- The date may not be inserted in the index mode depending on the printer. Consult the printer manufacturer.

“---- -- --” is printed on the date-inserted part of the image.

- The image does not have the recording data so the date cannot be inserted. Set [Date] to [Off] and print the image again (page 97).

Cannot select the print size.

- Consult the printer manufacturer as to whether the printer can provide the desired size.

Cannot print the image at the size selected.

- When you use paper of a different size after connecting the printer to the camera, disconnect and then reconnect the cable for multi-use terminal.
- The print setting of the camera differs from that of the printer. Change the setting of either the camera (page 97) or the printer.

Cannot operate the camera after canceling printing.

- Wait for a while as the printer is carrying out the cancellation. It may take some time depending on the printer.

Others

Cannot reset the file-number.

- If you replace a recording medium, you cannot initialize file numbers with the camera. To initialize file numbers, format the “Memory Stick Duo” (page 63, 66) or the internal memory, and then initialize the settings (page 67). However, the data on the “Memory Stick Duo” or the internal memory will be deleted and all settings, including date, will be initialized.

The camera does not function with the lens portion extended.

- Do not attempt to force the lens that has stopped moving.
- Insert a charged battery, then turn on the camera again.

The lens gets fogged.

- Moisture condensation has occurred. Turn off the camera and leave it for about an hour before using it.

The lens does not move when you turn off the camera.

- The battery pack is discharged. Replace it with a charged battery pack.

The camera becomes warm when you use it for a long time.

- This is not a malfunction.

The Clock Set screen appears when you turn on the camera.

- Set the date and time again (page 74).
- The built-in rechargeable backup battery is discharged. Attach a charged battery pack, turn off the camera and leave the camera for 24 hours.

You want to change the date or time.

- Set the date and time again (page 74).

Warning indicators and messages

Self-diagnosis display

If a code starting with a letter of the alphabet appears, the self-diagnosis function on the camera is working. The last two digits (indicated by □□) will differ depending on the state of the camera.
If you cannot solve the problem even after trying the following corrective actions a few times, the camera may need repair. Contact your Sony dealer or local authorized Sony service facility.

C:32:□□

- There is trouble with the camera's hardware. Turn the power off and on again.

C:13:□□

- The camera cannot read or write data on the "Memory Stick Duo". Try turning off and on the camera again, or taking out and inserting the "Memory Stick Duo" several times.
- The internal memory has experienced a format error, or an unformatted "Memory Stick Duo" is inserted. Format the internal memory or the "Memory Stick Duo" (pages 63, 66).
- The inserted "Memory Stick Duo" cannot be used with the camera, or the data is damaged. Insert a new "Memory Stick Duo".

E:61:□□

E:62:□□

E:91:□□

- A camera malfunction has occurred. Initialize the camera (page 67), then turn the power on again.

Messages

If the following messages appear, follow the instructions.



- The battery level is low. Charge the battery pack immediately. Depending on the conditions of use or the type of battery pack, the indicator may flash even though there are still 5 to 10 minutes of remaining battery time left.

For use with compatible battery only

- The battery inserted is not an NP-BG1 battery pack.

System error

- Turn the power off and then on again.

Internal memory error

- Turn the power off and then on again.

Reinsert the Memory Stick

- Insert the "Memory Stick Duo" correctly.
- The inserted "Memory Stick Duo" cannot be used in the camera (page 115).
- The "Memory Stick Duo" is damaged.
- The terminal section of the "Memory Stick Duo" is dirty.

Memory Stick type error

- The inserted "Memory Stick Duo" cannot be used in the camera (page 115).

Cannot access Memory Stick Access denied

- You are using the "Memory Stick Duo" with the access controlled.

Memory Stick formatting error
Internal memory formatting error

- Format the media again (pages 63, 66).

Memory Stick locked

- You are using the “Memory Stick Duo” with the write-protect switch, and the switch is set to the LOCK position. Set the switch to the recording position.

No memory space in internal memory
No memory space on Memory Stick

- Delete unnecessary images or files (page 35).

Read only memory

- The camera cannot record or delete images on this “Memory Stick Duo”.

No Images

- No images that can be played back have been recorded in the internal memory.
- No images that can be played back have been recorded on the “Memory Stick Duo”
- The selected folder does not contain a file that can be played back in a Slide Show.

Folder error

- A folder with the same first three digit number already exists on the “Memory Stick Duo” (for example: 123MSDCF and 123ABCDE). Select another folder, or create a new folder (pages 63, 64).

Cannot create more folders

- The folder with a name beginning with “999” exists on the “Memory Stick Duo”. You cannot create any folders if this is the case.

File error

- An error occurred while the image was playing back. Sony does not guarantee playback of image files on the camera if the files have been processedusing a computer or recorded with another camera.

Read only folder

- You have selected a folder that cannot be set as a recording folder on the camera. Select another folder (page 64).

File protect

- Release the protection (page 58).

Image size over

- You are playing back an image with size that cannot be played back on the camera.

Invalid operation

- You are trying to play back a file that is not compatible with the camera.
- You have selected a function that is not available for movies.

(Vibration warning indicator)

- Camera shake may occur due to insufficient light. Use the flash, turn on the anti-blur function, or mount the camera on a tripod to secure the camera.

640(Fine) is not available

- 640(Fine) size movies can be recorded only using a “Memory Stick PRO Duo”. Insert a “Memory Stick PRO Duo” or set the image size to a size other than [640(Fine)].

Macro is invalid

- The macro is unavailable under the current settings (pages 26, 30).

Flash settings cannot be changed

- The flash is unavailable under the current settings (pages 26, 30).

Maximum images selected

- You can select up to 100 images. Remove the checkmark.

No enough battery

- When copying a image recorded in the internal memory to the "Memory Stick Duo", use a fully charged battery.

Printer busy
Paper error
No Paper
Ink error
Low Ink
No Ink

- Check the printer.

Printer error

- Check the printer.
- Check if the image you want to print is corrupted.



- The data transmission to the printer may not be complete yet. Do not disconnect the cable for multi-use terminal.

Processing

- The printer is canceling the current print job. You cannot print until it is finished. This may take time, depending on the printer.

Music Error

- Delete the Music file, or replace it with a normal Music file.
- Execute [Format Music], then download a new Music files.

Format Music Error

- Execute [Format Music].

Invalid operation
HD (1080i) output in progress...

- You are trying to play back movies.
- You are trying to use the [Retouch] function.

TV output in progress...

- The camera is playing back images in the Slide Show mode.

No red-eye detected

- You may not be able to correct the red-eye phenomenon depending on the image.

Turn the power off and on again

- The lens mulfunction.

Remove the lens cap and turn the power off and on again

- Remove the lens cap and turn the power off and on again.

Self-Timer is invalid

- The self-timer is unavailable under these settings.

Using the camera abroad — Power sources

You can use the camera, the battery charger (supplied), and the AC-LS5K AC Adaptor (not supplied) in any country or region where the power supply is within 100 V to 240 V AC, 50/60 Hz.

- **Do not use an electronic transformer (travel converter), as this may cause a malfunction.**

On the “Memory Stick Duo”

A “Memory Stick Duo” is a compact, portable IC recording medium. The types of “Memory Stick Duo” that can be used with the camera are listed in the table below. However, proper operation cannot be guaranteed for all “Memory Stick Duo” functions.

“Memory Stick” type	Recording/ Playback
Memory Stick Duo (without MagicGate)	○*2
Memory Stick Duo (with MagicGate)	○*1
MagicGate Memory Stick Duo	○*1*2
Memory Stick PRO Duo	○*1*4
Memory Stick PRO-HG Duo	○*1*3*4

*1) “Memory Stick Duo”, “MagicGate Memory Stick Duo” and “Memory Stick PRO Duo” are equipped with MagicGate functions. MagicGate is copyright protection technology that uses encryption technology. Data recording/playback that requires MagicGate functions cannot be performed with the camera.

*2) The camera is not compatible with high-speed data transfer using a parallel interface.

*3) The camera is not compatible with 8-bit parallel data transfer. Supports 4-bit parallel data transfer equivalent to “Memory Stick PRO Duo”.

*4) [640(Fine)] size movies can be recorded.

- This product is compatible with “Memory Stick Micro” (“M2”). “M2” is an abbreviation for “Memory Stick Micro”.
- A “Memory Stick Duo” formatted with a computer is not guaranteed to operate with the camera.
- Data read/write speeds differ depending on the combination of the “Memory Stick Duo” and the equipment used.
- Do not remove the “Memory Stick Duo” while reading or writing data.
- Data may be corrupted in the following cases:
 - When the “Memory Stick Duo” is removed or the camera is turned off during a read or write operation.
 - When the “Memory Stick Duo” is used in locations subject to static electricity or electrical noise.
- We recommend backing up important data on a hard disk of your computer.
- Do not press down hard when you write down on the memo area.
- Do not attach a label on the “Memory Stick Duo” itself nor on a Memory Stick Duo Adaptor.
- When you carry or store the “Memory Stick Duo”, put it in the case supplied with it.
- Do not touch the terminal section of the “Memory Stick Duo” with your hand or a metal object.
- Do not strike, bend or drop the “Memory Stick Duo”.
- Do not disassemble or modify the “Memory Stick Duo”.
- Do not expose the “Memory Stick Duo” to water.
- Do not leave the “Memory Stick Duo” within the reach of small children. They might accidentally swallow it.
- Do not insert anything other than a “Memory Stick Duo” into the Memory Stick Duo slot. Otherwise, a malfunction may result.
- Do not use or store the “Memory Stick Duo” under the following conditions:
 - High temperature locations such as the hot interior of a car parked in direct sunlight
 - Locations exposed to direct sunlight
 - Humid locations or locations with corrosive substances present

Notes on using the Memory Stick Duo Adaptor (not supplied)

- To use a “Memory Stick Duo” with a “Memory Stick” compliant device, be sure to insert the “Memory Stick Duo” into a Memory Stick Duo Adaptor. If you insert a “Memory Stick Duo” into a “Memory Stick” compliant device without a Memory Stick Duo Adaptor, you might not be able to remove it from the device.
- When inserting a “Memory Stick Duo” into a Memory Stick Duo Adaptor, make sure the “Memory Stick Duo” is inserted facing in the correct direction, then insert it all the way in. Incorrect insertion may result in a malfunction.
- When using a “Memory Stick Duo” inserted into a Memory Stick Duo Adaptor with a “Memory Stick” compliant device, make sure that the Memory Stick Duo Adaptor is inserted facing the correct direction. Note that improper use may damage the equipment.
- Do not insert a Memory Stick Duo Adaptor into a “Memory Stick” compliant device without a “Memory Stick Duo” attached. Doing so may result in malfunction of the unit.

Notes on using “Memory Stick PRO Duo” (not supplied)

“Memory Stick PRO Duo” with a capacity up to 16 GB have been confirmed to operate properly with the camera.

Notes on using “Memory Stick Micro” (not supplied)

- To use a “Memory Stick Micro” with the camera, be sure to insert the “Memory Stick Micro” into a Duo-sized “M2” Adaptor. If you insert a “Memory Stick Micro” into the camera without a Duo-sized “M2” Adaptor, you might not be able to remove it from the camera.
- Do not leave the “Memory Stick Micro” within the reach of small children. They might accidentally swallow it.

On the battery pack

On charging the battery pack

We recommend charging the battery pack in an ambient temperature of between 10°C to 30°C (50°F to 86°F). The battery pack may not be fully charged in temperatures outside this range.

Effective use of the battery pack

- Battery performance decreases in low temperature surroundings. So in cold places, the operational time of the battery pack is shorter. We recommend the following to ensure longer battery pack use:
 - Put the battery pack in a pocket close to your body to warm it up, and insert it in the camera immediately before you start shooting.
- The battery pack will run out quickly if you use the flash or zoom frequently.
- We recommend having spare battery packs handy for two or three times the expected shooting time, and making trial shots before taking the actual shots.
- Do not expose the battery pack to water. The battery pack is not water-resistant.
- Do not leave the battery pack in extremely hot places, such as in a car or under direct sunlight.

How to store the battery pack

- Fully discharge the battery pack before storing and store it in a cool, dry place. To maintain the battery pack's function, fully charge the battery pack and then fully discharge it on the camera at least once a year while storing.
- To use the battery pack up, leave the camera in slide show (page 53) playback mode until the power goes off.
- To prevent staining the terminal, short-circuiting, etc., be sure to use a supplied battery case when carrying and storing.

On battery life

- The battery life is limited. Battery capacity decreases over time and through repeated use. If decreased usage time between charges becomes significant, it is probably time to replace it with a new one.
- The battery life varies according to how it is stored and the operating conditions and environment in which each battery pack is used.

On the battery charger

On the battery charger

- Do not charge any other battery pack other than the NP-BG type battery packs in the battery charger supplied with the camera. Batteries other than the specified kind may leak, overheat, or explode if you attempt to charge them, posing a risk of injury from electrocution and burns.
- Remove the charged battery pack from the battery charger. If you leave the charged battery pack in the charger, battery life may be shortened.
- When the CHARGE lamp flashes, remove the battery pack being charged, and then inserting the same battery pack into the camera again until it clicks. When the CHARGE lamp flashes again, this may indicate a battery error or that a battery pack other than the specified type has been inserted. Check that the battery pack is the specified type. If the battery pack is the specified type, remove the battery pack, replace it with new one or another one and check if the battery charger operates correctly. If the battery charger operates correctly, a battery error may have occurred.

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